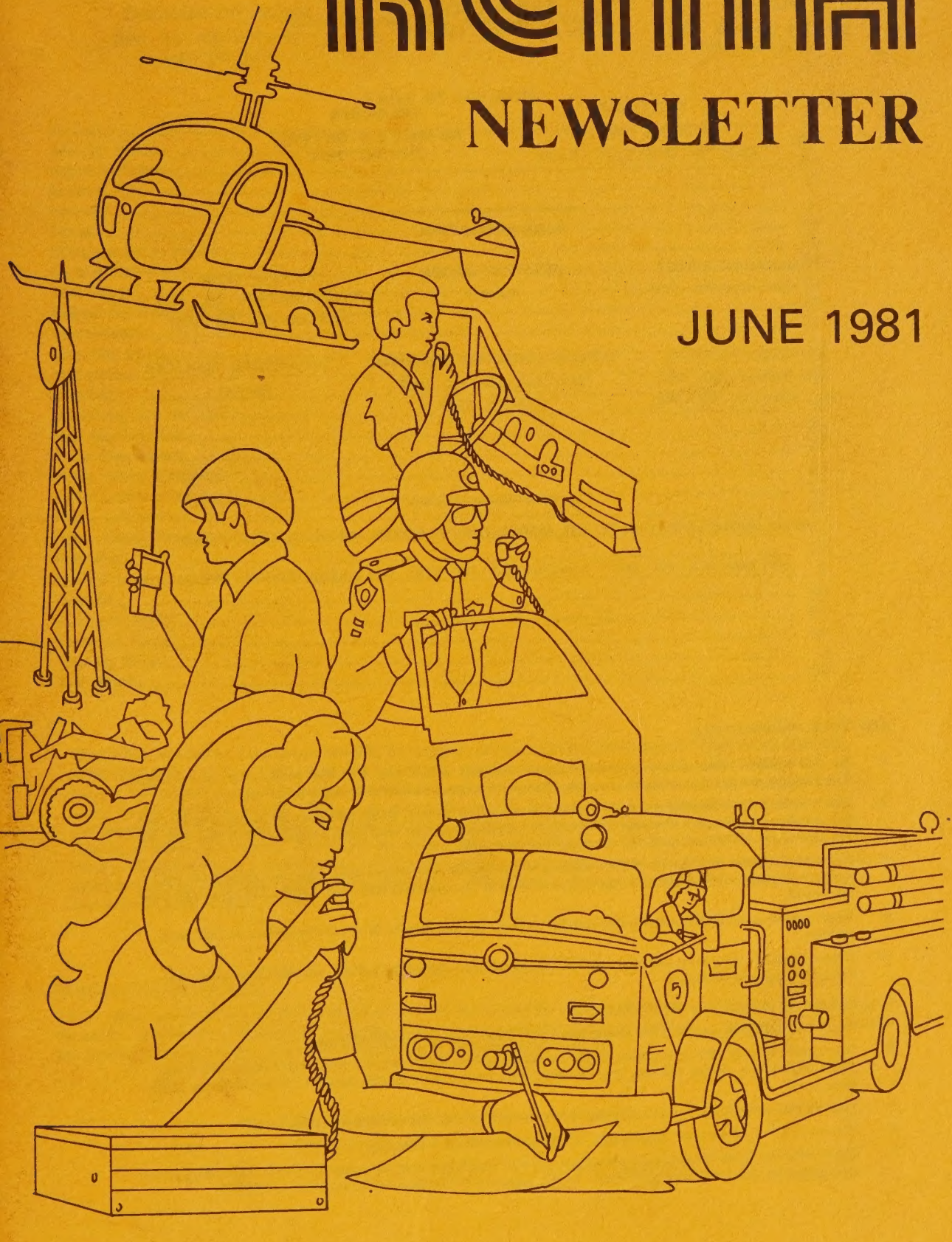
RCMA

NEWSLETTER



JUNE 1981

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OF MONITOR RADIO LISTENERS

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RCMA NEWSLETTER

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FOR YOUR INFORMATION:

1. All club business, unless otherwise noted, must be addressed to R.C.M.A., P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, newsletter delivery problems, etc.
2. Input to the RCMA Newsletter must be mailed to the proper editors, whose addresses are included in the individual column headlines. If no particular column seems appropriate, send input to RCMA, P.O. Box 216, Willow Grove, PA 19090 and mark the envelope 'For Newsletter.'
3. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address in the envelope; mail to R.C.M.A., P.O. Box 408, Earp, CA 92242.
4. Please include your RCMA membership number with all correspondence to newsletter editors or club headquarters.
5. If you require a reply when writing to RCMA headquarters or one of the editors, you MUST enclose a self-addressed, stamped envelope.
6. Please write on only one side of the paper.
7. Please don't combine in one letter several items that should go to different addresses.
8. If you want to type what you submit to the newsletter, please don't exceed a seven-inch column width and please single space. Doing this may save an editor from having to retype the material. Please don't use script type.
9. Your RCMA membership number and expiration date appear on your newsletter mailing label.
10. You may join or renew your membership for ONLY one year at a time.
11. The RCMA Newsletter accepts paid advertising. If you would like to place a paid ad, please write to the following address for our advertising guidelines: RCMA Newsletter, P.O. Box 4563, Anaheim, CA 93803.

RCMA NEWSLETTER

June 1981 Issue 64

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RCMA, P.O. Box 4563, Anaheim, CA 93803

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The RCMA Newsletter is published monthly by members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, P.O. Box 4563, Anaheim, CA 92803. Subscription rate/membership fee is $12.00 for U.S. residents. For persons in other countries, the following rates apply: Canada and Mexico—$13.50; Europe—$14.50 South Pacific and Asia—$15.00. These dues are payable in U.S. funds and are subject to change. Information contained herein is obtained primarily from members and does not necessarily present the position or reflect the opinion of RCMA as a whole. The RCMA Newsletter editors and officers are not responsible for the accuracy or validity of information contained herein. RCMA does not necessarily recommend or endorse products or services advertised herein. The publication is copyrighted ©. Reproduction of any material in this newsletter is prohibited without prior written consent.

NEWSLETTER DEADLINES:

* * * please note that the newsletter deadlines refer to the month the newsletter is to be mailed, not to the date on the cover. Information submitted by November 9, for example, will be mailed to members in December. The December mailing carries a January cover date to assist USPS in their speedy delivery.

June	8	MONDAY Newsletter deadline for 'July' Newsletter
July	6	MONDAY Newsletter deadline for 'August' Newsletter
August	10	MONDAY Newsletter deadline for 'September' Newsletter

** Calendar **

Send notices of upcoming events for the Calandar section to John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803. Please send notices well in advance of the Newsletter deadline.

The R.C.M.A. supports scanning and scanner clubs. If your local R.C.M.A. scanner group is having a meeting, or if you are another radio club planning a meeting, send an announcement to the Calendar Editor and it will be sent to all members of R.C.M.A. Because of individual member requests and previous problems, the Board does not feel that sectional mailing lists should be distributed.

Greater LA area R.C.M.A.

Tour of the new "VERDUGO" fire dispatch center 8:00 P.M. Friday May 15, 1981. Meet at 210 S. Orange, Glendale, Ca. Thomas Brothers map page 25 C-4. Information phone 213 956-4822. Talk in Frequency 144.330 simplex. This tour takes the place of the regular meeting scheduled at this time.

Board meetings are open to all members of R.C.M.A. They start at 7:30 PM. Now that we have separated labeling of the newsletter, the meetings will be devoted to R.C.M.A. policy and, of course, the latest scanner activities.

May 5	TUESDAY	Board Meeting at Anaheim Branch Library, 1349 S. Euclid.
June 9	TUESDAY	Board Meeting at Anaheim Branch Library, 1349 S. Euclid.

NEED BACK ISSUES?

Back issues are again available for sale to members in the lots indicated below. Please note that the RCMA Newsletter is a club newsletter. Because it reflects the growth of RCMA, early issues do not contain as many articles as do the current ones. The Newsletter has evolved from a few mimeo pages to its present format under the leadership of three great editors---Don Jones, Iden Rogers, and Chuck Gysi---and the contributions of club members.

The reproduction of the articles is quite readable. To cut costs and allow the possibility of binding all the reprints in a notebook, the format of later newsletters has been changed from saddle stitch to edge binding. This has changed the page order presentation, but not the content of the articles or the frequency lists.

To order: Using the information given below, send your requests to R.C.M.A., Bill Ell, Secretary, 2831 Hermanos St., Pasadena, CA 91107. Be sure to include your name, address, RCMA membership number (it is on your label), and your check or money order payable to R.C.M.A.

PRICES VALID UNTIL JANUARY 1982

Lots (Months/Year)	No. of Issues	Price
Sept 75 – June/July 76 (No Oct or Nov published)	7	$ 2.00
Aug – Dec 76 (No Oct published)	4	$ 3.00
Jan – June 77	6	$ 4.00
July – Dec 77	6	$ 4.00
Jan – June 78	6	$ 5.00
July – Dec 78	6	$ 5.00
Jan – June 79	6	$ 6.00
July – Dec 79	6	$ 6.00

Reports of Meetings and Officers

Send reports (informal accounts) of RCMA meetings, gatherings, etc. which have occured to: John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803.

Please note the change in the dues structure which were mentioned in the January, forward newsletters. To reiterate, the dues are:

The 50 United States	$12.00	
Canada & Mexico	$13.50	(These additional fees reflect part of the higher cost of mailing)
Europe	$14.00	
South Pacific & Asia	$15.00	

These prices are valid until July 1, 1981.

Note also the date on the top line of your newsletter label. That is the month in which your newsletter subscription will terminate. For the new members who enrolled using the rate structures found in older publications, your subscriptions have been prorated.

The last four issues have been mailed under a new procedure. The mailing date has been shifted to about five days after the Board Meetings. We used to be three to four weeks in advance of the newsletter's cover date; now, under even the worst conditions, we will be two weeks ahead of the date. You should receive your newsletter no later than the first week of the month on the cover.

THOUGHT waves

Chuck Gysi, Managing Editor, P.O. Box 216, Willow Grove, PA 19090

YOUR THOUGHTS

P.O. Box 216, Willow Grove, PA 19090

NO COLUMN THIS MONTH

Business, Etc.

Chuck Gysi, Editor

This column is for reporting frequency and radio system information for the following varied services: business, forest products, petroleum industry, special industrial, manufacturers, news media (behind-the-scenes radio, TV, and newspaper), motion picture industry, security (private patrol, detective agencies, campus security and police, amusement park and stadium security, shapping center and mall security, plant/business/hotel security, etc.), General Mobile Radio Service (GMRS), Mobile Phone/RCC and paging, trucking firms, bus lines, taxi cabs, tow trucks, utility companies (private and municipal water, power, electric, gas, telephone, etc.), and all school and college related frequencies. Send information and questions pertaining to the radio services covered in this column to: Chuck Gysi, P.O. Box 216, Willow Grove, PA 19090.

NO COLUMN THIS MONTH

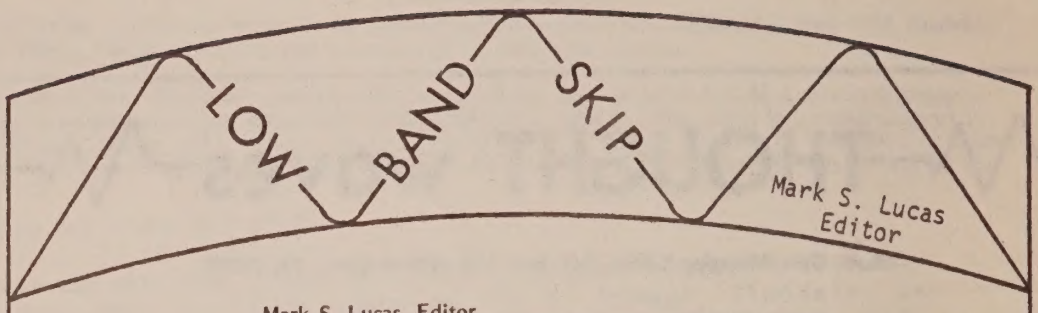
COMMUNICATIONS PROFILE

RCMA; P.O. Box 216, Willow Grove, PA 19090

This column is for special projects that explain various radio systems in detail. Frequencies and radio codes of not only municipal agencies and certain federal government agencies may be listed, but also large businesses and corporations. The contribution myst be lengthy enough that publishing it in one of the regular columns would not be possible due to length. If you are inclined to submit a report, please follow No. 8 in the inside front cover of the Newsletter.

NO COLUMN THIS ISSUE

From the paste up crew. It is our fault that Chuck Gysi's columns are not present. Ours, and part due to USPS and the IRS also.



Mark S. Lucas, Editor

Send reception reports relating to distant stations received in the 30–50 MHz band, plus any Low Band DXing tips, comments, or articles to: Mark S. Lucas, 721 McKinley Avenue, Lancaster, OH 43130. If you need a Low Band skip reception report form, send an SASE with your request.

NO COLUMN THIS ISSUE

Marketplace

Gary M. Darcy, Editor

Members may advertise, free of charge, items wanted, items for sale, and items for trade that are associated with the hobby of monitor/utility radio listening. No dealer ads will be accepted for this column. RCMA assumes no responsibility for the outcome of any transactions between members resulting from ads printed in this column. Send to: RCMA MARKETPLACE, c/o Gary M. Darcy, P.O. Box 1329, Palmdale, CA 93550. Please be sure to include your membership number.

NO COLUMN THIS ISSUE

Miscellany

P.O. Box 216
Willow Grove, PA 19090

NO COLUMN THIS ISSUE

MONITORING & THE LAW

EDITOR WANTED!

We need a new Monitoring and the Law column editor. This person should have some familiarity with monitoring laws and it would be desireable if he/she had a collection of them from around the nation. This editor would be required to generate some information for the column as well as organize input from the general membership. If you are interested, please TYPE a letter telling about yourself and qualifications to: RCMA Managing Editor, P.O. Box 216, Willow Grove, PA 19090.

Aircraft

Major Ron Hammer, Editor

Send private, commercial, firefighting, and law enforcement aircraft frequencies of interest in the 108–136 MHz range and frequencies in other bands above 30 MHz associated with airports and aircraft, plus questions, articles, and tips related to aircraft monitoring to: Major Ron Hammer, 821 Elisa Way, Roseville, CA 95678.

My little bride announced this morning that I had two basic choices: 1) Write this column, or 2) mow the lawn. (While we shovel no snow here in the Sacramento area, one does have to start mowing the grass about February or March.) So, having started the mower for her--here we go. I get a number of requests to review some basics for those new to the hobby. I plan to list some sources of data such as what the hobby is all about, frequency lists and some Air Traffic Control and general "airplane talk" terminology. If you are expecting to read a definitive work on any subject, you will not see it in this column. Most of what I say herein is how things are as I see 'em as a layman. Self-announced "experts" always turn me off--in any field. There are a couple subjects in the world that I do know a fair amount about, but radio ain't one of them!

Where can the beginner go to get started? Well, Bob Grove (Grove Enterprises, Inc. Brasstown, NC 28902--you don't need any more address than that--there can't be more than 200 people in Brasstown, NC.) has a little book COMMUNICATIONS MONITORING (#BOK-2 $5.95 + $1.75 s & h) that is a starter. I'd like to say right here that, yes, I do get a lot of stuff from Bob--which is no accident. His entire product line is devoted to listener-monitoring. I get a snide remark from someone now and then about people who seem to contribute their talents to the hobby for money instead of just for fun. Well, if it weren't for people like Bob who do do things for the hobby as a professional (writer, supplier-distributor, etc.) the hobby would be extremely limited. If it weren't for the hobbyists-gone-business people such as Radio West's crew (NEW ADDRESS: 2015 South Escondido Boulevard, Escondido, CA 92025) and Jeanne & Perry Ferrell's Gilfer Shortwave (P. O. Box 239, Park Ridge, NJ 07656) and Fair Radio Sales surplus goodies (P. O. Box 1105, Lima, OH 45802) and Capri Electronics neat little kits (Route 1, Box 91-1J, Canon, GA 30520) we'd either have to build everything from scratch (did you ever try to build a transistor?) or we'd be left with only the corporate giants such as Radio Shack (Tandy Corporation, Ft. Worth, TX 76102), Heathkit (Heath Company, Benton Harbor, MI 49022), Regency Electronics, Inc. scanners (7707 Records Street, Indianapolis, IN 46226) and Masco Corporation of Indiana's Electra Company (300 East County Line Road, Cumberland, IN 46229) who, of course make the BEARCAT line of scanners. The big guys are usually just too cumbersome and monolithic to be very responsive to requests from small-quantity users. If ten people wrote to Bob Grove asking for some electronic widgit, he'd probably try to furnish it--if 1,000 people wrote to Electra begging for, say a UHF aircraft band scanner, they'd probably respond with, "Sorry, there's just no interest in such a scanner." Don't knock the little guys who assemble collections of books and toys for us. Everyone has to make a living and I admire someone who can combine it with his hobby. By the way, the above listing is certainly not all inclusive, but they all do offer a free catalog of some sort.

A lot of good poop can be gleaned from other radio clubs' newsletters. Rodney L. Morris writes a column titled "Books and Things" for the Longwave Club of America's The Lowdown newsletter (P. O. Box 33188, Granada Hills, CA 91344) wherein he lists all manner of obscure little specialty manufacturers, suppliers and publishers of radio oriented stuff. I would subscribe to THe Lowdown just for Rodney's column whether I was into longwave, low-freq. (below 540 KHz) listening or not. The IRCA (International Radio Club of America, a broadcast band (BCB) DX club) offers "A DXer's Technical Guide" book (P. O. Box 21074, Seattle, WA 98111) for about $4.50 as I recall. Some of the general monitor-listening data is good poop for listeners of any band. Tom Kneitel's "Registry of U. S. Government Frequencies" ($5.95 from CRB Research, P. O. Box 56, Commack, NY 11725) has an excellent 14 page blurb on scanner-monitor listening. (Tom is another one who

makes a buck out of the radio hobby as a writer and publisher.) The NRC (National Radio Club Publications Center, P. O. Box 401, Gales Ferry, CT 06335 lists hundreds of reprints from their newsletters. While primarily another BCB DX club, they have articles such as "Spurious Signals" by Gordon P. Nelson (reprint #R 1 for about a buck) that applies to most all radio receiving. He discusses harmonics, parasitic radiation, sideband splash, external mixing (very interesting) cross modulation, birdies, internal mixing, images (important to scanner monitoring), overloading and other spurious signal information. While on the subject of such interference, the American Radio Relay League, Inc. (Newington, CT 06111) offers as one of their numerous radio books a $3 booklet "Radio Frequency Interference". Also from the IRCA "Goodie Factory" (P. O. Box 17088, Seattle, WA 98107) are reprints such as the clever "Perceptual Confusions Among Letters of the Alphabet--An initial look at call-sign mis-identifications" by Gerry Thomas for about 20¢ and "Principles of Broadcast Band DX'ing" which has some general radio-listening information. There is just no end to data that are available. A lot of it is free (like most of the catalogs), some of it is very cheap (like the reprints--usually about 10¢ or so per page for some very concentrated data) and most all of it for under an eight dollar bill. I have picked up all of this data in just the past 13 months. Obviously everything is not culled out for just the VHF/UHF scanner listener, particularly if he is just into aircraft band. The monitor-listening hobby is bigger than that, so you can do yourself a lot of good reading some of the general or other-band information. For example, the Worldwide TV-FM DX Assn. (WTFDA P. O. Box 97, Calumet City, IL 60409) puts out the "VHF/UHF Digest" which is primarily concerned with long distance (skip) TV and FM band reception--both of which are in the same bands scanner-monitors are into. They also offer a whole bunch of reprints for a per-page charge.

Frequencies! Where do you get frequencies? How many are there? Once you've advanced beyond how to turn your scanner on, what do you listen to? For those who chose to take my austute advice in a previous column and raced out and got their really neat Frequency Spectrum Wall Chart (Heath Cat. #HDP-1495 $4.95) you can readily see that between the the Very Low Frequency band beginning at 3 Kilo-Hertz (3,000 cycles per second) and running through the top of the Extremely High Frequency band ending at 300 GigaHertz (300,000,000 cycles per second) there would seem to be a goodly number of frequencies. (The electro-magnetic spectrum goes on from there up into the infrared, visible, ultra-violet, x-ray and gamma ray bands--which are used for some forms of data transfer. Also, the Navy has done some work in the Extremely Low Frequency band at their ELF facility near Clam Lake, WI going down to as low as 76 Hz (76 cycles per second)! In reality there are an infinite number of frequencies, however, as they are fractionated such as 510.2625 MHz and even finer graduations. Since ol' James Clerk Maxwell mathematically predicted radio waves back in the 1860's (no they weren't invented by Mr. Marconi) mankind has sought to deal with waves and frequencies. Heinrich Hertz probably made the first radio waves (hence frequency measurements being given his name). Earthlings continue to gather together and worry for weeks on end how to divide up and control the various bands and frequencies with groups such as the ITU (International Telecommunications Union) sending 2,200 delegates to Geneva, Switzerland for 10 weeks to attend the WARC (World Administrative Radio Conference).

The problem is that even with 150 countries represented at such a WARC, not all countries go along with the decisions hashed out there--particularly some of the "Third World" and many of the communist block countries. Giant all-encompassing bodies are formed to closely control everything--such as our Federal Communications Commission here in the U. S. of A. The FCC controls every frequency in the U. S., right? Wrong! The Department of Commerce has IRAC (Interdepartmental Radio Advisory Committee) which assigns frequecies to all U. S. Government agencies--and they use a bunch of them--like maybe 100,000 or so, according to Bob Grove. After all of these groups make all of these rules, all of the rules are then promptly broken either illegally or by various waivers and exceptions. Just making a cursory scan through Grove's "Federal Frequency Directory" (#BOK-1, $14.95 + $2 s & h) one can see all kinds of listings between 50 MHz and 108 MHz

including government statinns squarly in the FM broadcast band (88-108 MHz). One would expect to find only FAA or military transmissions in the aircraft band

of 108-136 MHz. However, there are frequencies listed for the Department of the Interior, Justice, Tennessee Valley Authority and God knows what all. For the neophyte, all air-ground transmissions are,of course, not on aircraft band frequencies, either VHF or UHF. Police, firefighters, news reporters (like our local "Newscopter 3"--transmitting audio/video on about 2 GigaHertz microwave) may use just about any imaginable frequency. I enjoy listening to the local KGNR radio "Airwatch" on about 161.73 MHz and KFBK radio's traffic watch around 453-455 MHz as some of the VHF/UHF chatter is definitely not for public (broadcast) consumption. A lot gets filtered out before you hear it on the BCB news program!

Just going through my rudimentary stack of frequency sources I find the following: The already mentioned Grove "Federal Frequency Directory" with about 100,000 U. S. Government listings between 2,000 KHz and 420 MHz--with a few exceptions. Bob also recently sent me a packet of microfiche plates of all FAA frequencies primarily grouped 194-524 KHz (mostly radio beacons), 2182-27935 KHz (HF), 39.22-41.69 MHz, 74.996-75.004 MHz (mostly marker beacons), 108-135.975 (mostly ATC--but not entirely), 138.575-173.9 (mostly navaid maintenance), 225-459.95 MHz (mostly military ATC) and 762-23600 MHz (radars, microwave relay, maintenance and all sorts of things.) A very interesting set of data--unfortunately my microfiche reader is at my office and my radios are at home. Many libraries have readers, however. I suppose you could do it with a powerful magnifying glass, too. The FAA has control of alot of frequencies besides your local tower and approach control.

The widely known "Police Call Radio Directory" ($5.95 from Hollins Radio Data, P. O. Box 35002, Los Angeles, CA 90035 lists an immense amount of generally "public service" radio frequencies on a regional basis mostly 33-49 MHz (low band) 152-171 (high band) and 450-512 (UHF band). As already noted, a lot of airplane talk occurs on these frequencies depending upon if they are police, fire, press or whatever aircraft. The California Highway Patrol operates a couple little bean-shaped helicopters up and down Interstate 80 that passes by my house. It is somewhat disconcerting to have them fly over at night with their nova-like spotlight on when you are peacefully skinny-dipping in your hot tub! (I'd like to hear that: "Dispatch--it looks like we've got a couple of subjects about 50 meters southwest of the highway--one looks to be a female, about a size...")

Getting back to the subject. I have a freebee listing from "Betty Bearcat" (Electra Company) that lists a number of regional freqs, but not much air-ground. (No one is interested in that air-groung stuff, right?) Steven Handler's "Radio Communications Guide" (Handler Enterprises, Inc., P. O. Box 48, Deerfield, IL 60015) has all kinds of neat, hard-to-come-by freqs, although most are HF band. ($7.95 the last I heard). Nathan Young (RCMA #FL021) puts out a little regional booklet titled "Code 20 Radio Directory" (P. O. Box 4033, Warrington, FL 32507) for $4.50 per any one state. (See his ad in this newsletter.) Tom Kneitel's "Registry" has already been mentioned. It covers "secret" government freqs between 25-470 MHz. Tom also published "AIR SCAN" through CRB Research ($5.95 P. O. Box 56, Commack, NY 11725) This booklet is strictly aviation oriented (108-136 MHz). Gilfer's "Confidential Frequency List" is only HF utility freqs (4-25.6 MHz) for $6.95. NASA's "Satellite Situation Report" is just satellite up/down links (freebee from Goddard Space Flight Center, Greenbelt, MD, a periodical.) The venerable World Radio TV Handbook is "just" 600 pages of broadcast stations between 155 KHz and 27790 KHz, plus a lot of good general radio information (35th Edition $16.50--sold worldwide--Gilfer, Grove, etc.) Many times in this column there has been listed all the Air Route Traffic Control Center addresses to get their ATC "Enroute" frequecy/sectorization plans.

There are more sources, of course--personal compilations, etc. If you sat down and extracted all applicable local frequencies from the above lists it would certainly give you several evenings enjoyments trying them all out. Remember, if

all else fails, if you have a scanner with a search mode just set in some limits and let it do its thing while you do something else. For example, I find that by putting in about 128.5 - 131.0 MHz I can get all kinds of airline company chatter from the traffic into and out of the bay area. You can get everything from their booze orders for the cocktail flights to an occasional tidbit on who is doing what to whom on the off-duty level. A lot of it is clipped, boring and repetitious, of course, but some of it is quite interesting. The airlines are understandably not too keen on having everyone listen to their in-house discussions of such things as, "Yea, our #3 generator is really acting up, but I think we can make it to Portland before it quits completely." While such things are routine in the flying business, it is not given to inspiring confidence in the minds of the "geese" (passengers) in the back who like to think everything is just humming along perfectly. "A penny saved is a penny earned" applies to aircarrier operations as well as anything else.

Speaking of such airplance chatter, I mentioned in my last column that Arnold L. Salmon (SD-001) from Canova, SD wrote some interesting inquiries of what he had heard over the air. Arnie was an Aviation Cadet pilot trainee back in World War II, so his "I've only been into aircraft monitoring for about 10 days now" doesn't necessarily mean he just fell off the punkin wagon. Arnie asks, what does "We do have Kilo" mean. The pre-recorded and repeating Automatic Terminal Information Service (ATIS) that is usually around the VOR freqs. (108-117.9 MHz) are given a letter code for each new update of data. The first one of the day is "Alpha" and so on. The continuing transmissions of weather data for a terminal area are all thus coded. To ask a pilot if he has the ATIS weather is not good--he may have the weather, but not the latest weather. The controller thus knowing that "Kilo", say, is the latest then asks, "Do you have Kilo?" If the pilot says, "Negative, I have Juliet" (or anything but Kilo) then he is going to have to be given the most currrant terminal area weather by the controller. (Remember, all of these answers are out of my head, not a book, so they may not be precise--but are nevertheless a usable answer.)

Next question concerns "windshear". Wind, or moving air currents do not all move neatly along in the same direction. Differing levels have winds of differing directions and velocity. At the interface where such "currents" of air cross over or under each other, there is often some turbulence. While this presents some navigational and comfort problems at altitude, windshear near the surface can be even more disconcerting. Say the wind on a big airfield is being reported at 090° at 25 Knots. Just about "roundout" for touchdown on landing you might find that at that very spot the wind might be 270° at 25 Knots. That can sure screw up a good landing. At bigger airports, the wind is read as close to the touchdown end of the active runway(s) as possible--and can vary widely. It is also disconcerting when you have a "crab" (angle of direction) set in for a strong breeze and it suddenly dies just over the "threshhold" (landing end) of the runway. Wave Activity? I'll have to look that one up, for sure, but it also has to do with wind and turbulence. "I'll check our weight...Yeah, it says we can't go up." ATC wanted the aircraft to climb to a higher altitude, but by checking the aircraft weight against a plethora of charts of performance, etc. it was determined that it would not be feasible (or downright impossible) to climb any more. The ol' C-130 "Herkies" I flew would flat quit climbing at 18,000 to 20,000 feet on certain days (air temps, etc.) and heavy loads. Being cleared to Flight Level 230 (23,000 feet) was a no-no. As fuel burns off, of course, airplanes get lighter and can usually climb higher if no other restrictions limit them (lack of suitable oxygen equipment, company policy, etc.) I hold the world altitude record for a C-130E between Pisa, Italy and Elevsis, Greece of 33,400 feet with a light load. Of course, I'm also probably the only pilot to ever fly between those two points in a Herk. So what.

(I'm not too much on paragraphing, so I'll throw one in here.) What does "rotation" mean? That's when you pull the nose up into the take-off attitude and start to get your first clue if the machine is going to fly or simply run off the end of the runway. Particularly when you are heavy (not you personally, but the airplane) "rotation" is sort of the moment of truth. In big,

heavy airplanes (such as a B-52) that might have a 10,000 foot ground roll on a 11,000 foot runway, the rotation point is not left to barnstormer seat-of-the-pants "feel" for it like in Piper Cub flying. From the aforementioned performance charts various "acceleration checks" (against time in seconds or distance in runway markers) are computed and closely monitored. They are called things like "S-1", "S-2" or "V-1" "V-2" or simply "go-no-go" or "rotation" or whatever, in different airplanes. There is a point on all takeoffs beyond which you cannot stop on the remaining runway if you are too heavy. SAC was really big on heavy-weight takeoffs. The ol' KC-97 was designed for a maximum of 153,000 lbs. gross takeoff weight, but we regularly flew them at 175,000 lbs. pulling that nose wheel off just about the overrun on the far end--and trusting in God and John Boeing and your flight engineer who computed the takeoff data.

Arnie, those numbers on your sector charts are undoubtedly latitude and longitude numbers all run together. The 445730 1031000 would be 44° 57' (minutes) 30" (seconds) North Latitude, 103° 10' 00" West Longitude which would be about right for the area in question. I'll not get into a discussion of Latitude/Longitude here. Go look at a globe if you don't understand it.

Yes, the Official Airline Guide <u>can</u> be purchased if you can't talk some travel agent out of a just-out-of-date copy. There must be a ticket agent or travel agency of <u>some</u> type around where you live (where <u>anyone</u> lives). The company's address is Official Airline Guides, Inc., 2000 Clearwater Drive, Oak Brook, IL 60521. I think they offer only subscriptions (about $85.80 per year!), not single issues. As they go out of date every month or two, free ones are always coming available. They are hard to get rid of like big city phone books and Sears catalogs.

As to "fuel on board", yes, different companies use different "codes" or abbreviations. Yes, big airplanes carry a remarkable amount of fuel. I have seen the Air Force KC-135 (Boeing 707 types) <u>off-load</u> 108,000 lbs of jet fuel in one in-flight refueling. That's 54 tons or about 17,000 gallons that just ran out the back end! An aviation cadet pilot training classmate of mine filled up a B-47 on a deployment to a civilian field with <u>his</u> oil company credit card. He said he'd never forget his wife's face when that bill came to the house for about $11,000 or so. He allowed that "fortunately" the government reimbursed him for it. The cost of fuel is wreaking havoc with aviation today. I had an airline company executive come all the way to Okinawa to plead that our controllers should shorten his aircraft's traffic patterns by 10 minutes. Even a "little" C-130 will suck up 4,000 Lbs per hour just cruising along. Many airplanes will hold so much fuel that it will <u>shorten</u> their range if too full due to the weight. Maximum cruise <u>time</u> and maximum range <u>distance</u> are two different sides to the same coin. It's all thrust, drag, <u>lift</u> and weight relationships--all on charts for complex airplan es. You'd better believe in the charts, because the airplane does!

Pat Stewart (CAAL-023) the Air Traffic Control Specialist from Oakland Center has called a couple of times. He sent me a very useful copy of Change 6 to Appendix 4 of the FAA's manual 7110.65A "<u>PILOT/CONTROLLER GLOSSARY</u>" which is a glossary of terms used in flying. Now there is <u>nothing</u> you guys can ask me that I won't have an answer for. (Ha) I'd hoped to get into it a little, but I see I've run off at the mouth for too many pages already. We'll save it for next time. I'll include a copy of page 1 (of 44) for your familiarization with what it is all about. Pat also includes his private business card for "ONLY" Transceivers, scanners, assessories--P. O. Box 2, Mount Eden, CA 94557. Pat's phone number is (415) 782-7740 if you want to check out his product line or talk to a real ATC controller.

By the way, if you want a neat little book on airliners look around your local book store for Macmillan Company's "Civil Airliners since 1946" by Kenneth Munson; the pocket encyclopedia of World Aircraft in color, with performance specs., etc. It is one book of a series (Bombers, Fighters, Private aircraft, etc.)

George Duboise (OR-001) writes that Portland International (PDX) has ATIS now on 128.35 and 354.0. Final approach is 126.9, 124.9 and simulcast on 290.3. George gets his jollies listening to U. S. Army ATC transmissions on 35.0, 37.6, 38.25, 38.0, 35.25, 38.25, 36.9 and 40.0 MHz--from KOREA! He says the skip comes in pretty good from 1600-1900 PST. I've flown quite a bit in Korea and I know where it is. It's a hellofa long ways from Portland, OR! The Pacific-Australia (Yellow) IFR Supplement lists lots of such freqs. I had a lot of stuff published in that ol' Yellow book when I was the ATC chief on Okinawa ('71-'75).

Well, I'm getting tired of writing this diatribe (and I think my sweet thing has the lawn about mowed), so I'll close with E. P. Morsell's (CAME001) very timely frequency list. Thanks for an excellent pre-printed list, E. P.

Oh, yes, Karl Pagel (CAOR-022) sends me via Bryan Hunnell (CAOR-097) a set of new Los Angeles Center sectorization charts which I'll include as "several" of our members seem to live in Southern California. You may have to get a magnifying glass to read them. Sorry. There are a few more letters, but my fingers are about to fall off now. Go get some new 12¢ postcards and send away for all of the stuff I've listed for you. That ought to hold you until next month. While you're at it, ask for the FM Atlas catalog, too (Adolph, MN 55701).

UNITED AIRLINES

5. BUSINESS RADIO FREQUENCIES (MHz)

	BASE STATION		PORTABLE/MOBILE	
STATION	CALL SIGN	FREQUENCY	CALL SIGN	FREQUENCY
System		464.500	KGU939	464.500
System	KEM416	464.550	KEM416	464.550
System			KE8856	465.725
ABE	KYT731	460.725	KE8856	465.725
BAL	KFV433	460.725	KE8856	465.725
BOI	KQM403	460.725	KE8856	465.725
BOS	KBM596	460.725	KE8856	475.725
BUF	KDB842	460.725	KE8856	465.725
BUR	KRF694	460.725	KE8856	465.725
CAK	WPX763	460.725	WPX763	465.725
CLE	KAX259	460.725	KE8856	465.725
CLE			KA25674	467.875
DAY	LX0494	460.725	KE8856	465.725
DCA A	KRJ333	460.725	KE8856	465.725
DCA B	KGG805	460.650	KGG805	465.650
DEN A	KDD678	460.725	KE8856	465.725
DEN B	KTW360	460.825	KTW360	465.875
DEN Teams			KQ5294	467.750
DEN Teams			KQ5294	467.775
DEN Teams			KQ5294	467.800
DEN Teams			KQ5294	467.825
DENKR	KZU207	460.675	KZU207	469.675
DSM	KLC305	460.725	KE8856	465.725
DTW	KGQ915	460.725	KE8856	465.725
EMR	KFF500	460.725	KE8856	465.725
EXO	KCJ923	464.375	KCJ923	469.375
FLL	KWL879	460.725	KE8856	465.725
GEG			KA29767	460.725
GIT	KZE833	460.725	KE8856	465.725
HNL	KFN267	460.725	KE8856	465.725
HSV	KKC336	460.725	KE8856	465.725
IAD	KCU388	460.725	KE8856	465.725
ITO	KQN798	460.725	KE8856	465.725
JFK	KDD677	460.725	KE8856	465.725
LAS	KQW663	460.725	KE8856	465.725
LASHH	KTW856	464.575	KTW856	465.725
LAX A	KML555	460.725	KE8856	465.725
ONT	KAX261	460.725	KE8856	465.725
ORD A	KAX258	460.725	KE8856	465.725
ORD B	KCJ922	464.325	KCJ922	469.325
ORD C	KRY386	464.775	KRY386	469.775
ORD Teams			KO9109	467.750
ORD Teams			KO9109	467.775
ORD Teams			KO9109	467.800
ORD Teams			KO9109	467.825
ORD Teams			KO9109	467.850
ORD - O.W. Paging	KBX725	462.825		
ORF	KWC450	460.725	KE8856	465.725
PDX	KFL538	460.725	KE8856	465.725
PHF			KG3287	460.725
PHL	KBO745	460.725	KE8856	465.725
PIT	KBO744	460.725	KE8856	465.725
RIC	KQO652	460.725	KE8856	465.725
RNO	KFD232	460.725	KE8856	465.775
ROC	KLO781	460.725	KE8856	465.725
SAN	KRU899	460.725	KE8856	465.725
SEA	KFS442	460.725	KE8856	465.725
SFO			KA29146	467.875
SFO A	KGU934	460.725	KE8856	465.725
SFO B	KFJ292	460.875	KFJ292	465.875
SFO C	KDD676	464.325	KDD676	469.325
SFO N Term			KA29146	457.550
SFO Paging	WYS363	462.775		
SFOMB			KZ2456	467.775
			KZ2456	467.775
			KZ2456	467.870
			KZ2456	467.900
SFO MOC				
SFO MOC				
SFO MOC	Crane Cont.		KX2546	467.850
SFO MOC	Crane Cont.		KX2546	467.900
SJC	KLO780	460.725	KE8856	465.725

Aircraft continued

LAX B	KLO779	460.825	KLO779	465.825	SLC	KRE888	460.725	KE8856	465.725
LGA	KJX291	460.725	KE8856	475.725	SMF	KFP838	460.725	KE8856	465.725
LGA			KD8330	460.9125	System	KEM416	464.550	KEM416	464.550/ 469.550
LNK	KWY216	460.725	KE8856	475.725					
MCI	KZA731	460.725	KE8856	475.725	TOL	KYP795	460.725	KE8856	465.725
MCO	WYY771	460.725	WYY771	465.725	TPA	KWL880	460.725	KE8856	465.725
MDW	KRR469	460.725	KE8856	475.725	TYS	KWM541	460.725	KE8856	460.725
MEM	WYT754	460.725	WYY771	465.725					
MIA	KDQ655	460.725	KE8856	475.725					
MKE	KBO743	460.725	KE8856	475.725					
MRY	KUH326	460.725	KE8856	475.725					
MSP	KEZ643	460.725	KE8856	475.725					
OAK	KLC479	460.725	KE8856	475.725					
OMA	KAX260	460.725	KE8856	475.725					

6. AERONAUTICAL UTILITY MOBILE RADIO (Airport Control Tower Ground Control) Frequencies (Mlz)

Frequency	Station
121.65	LAX,SFO
121.70	BOI,CLE,DCA,MDW,MFR,ROC,SAN,SEA,SJC
121.75	OAK,LAX
121.80	DTW,EWR,HNL,MIA,SFO
121.90	BAL,BOS,BUF,DEN,DSM,HNL,IAD,LAN,LAS, MKE,MKG,MSP,OAK,OMA,ONT,ORD,ORF,PDX
127.50	MIA

7. LOCAL AERONAUTICAL ENROUTE RADIO (Gate Assignment, Weight Manifest and Airport Traffic Advisory)

Frequency (MHz)	Station
128.90	ORD
129.00	PDX,SEA
129.30	ABE,BAL,BOS,BUF,CLE,DCA,DTW,EWR,FLL,IAD, JFK,LGA,MDW,MEM,MIA,MKE,ORD,ORF,PBI,PHF, PHL,PIT,RIC,ROC,TPA
129.40	LAX
129.50	BOI,BUR,DEN,DSM,ELY,EKO,GJT,LAS,LAX,LNK, MCI,MRY,MSP,OMA,ONT,PDX,PDT,RNO,SBA,SAN, SEA,SFO,SJC,SLC,SMF,VIS
129.55	EWR
130.15	CLE
130.30	HNL,ITO,OAK,ORD
131.00	SFO
131.35	DEN
131.40	SFO

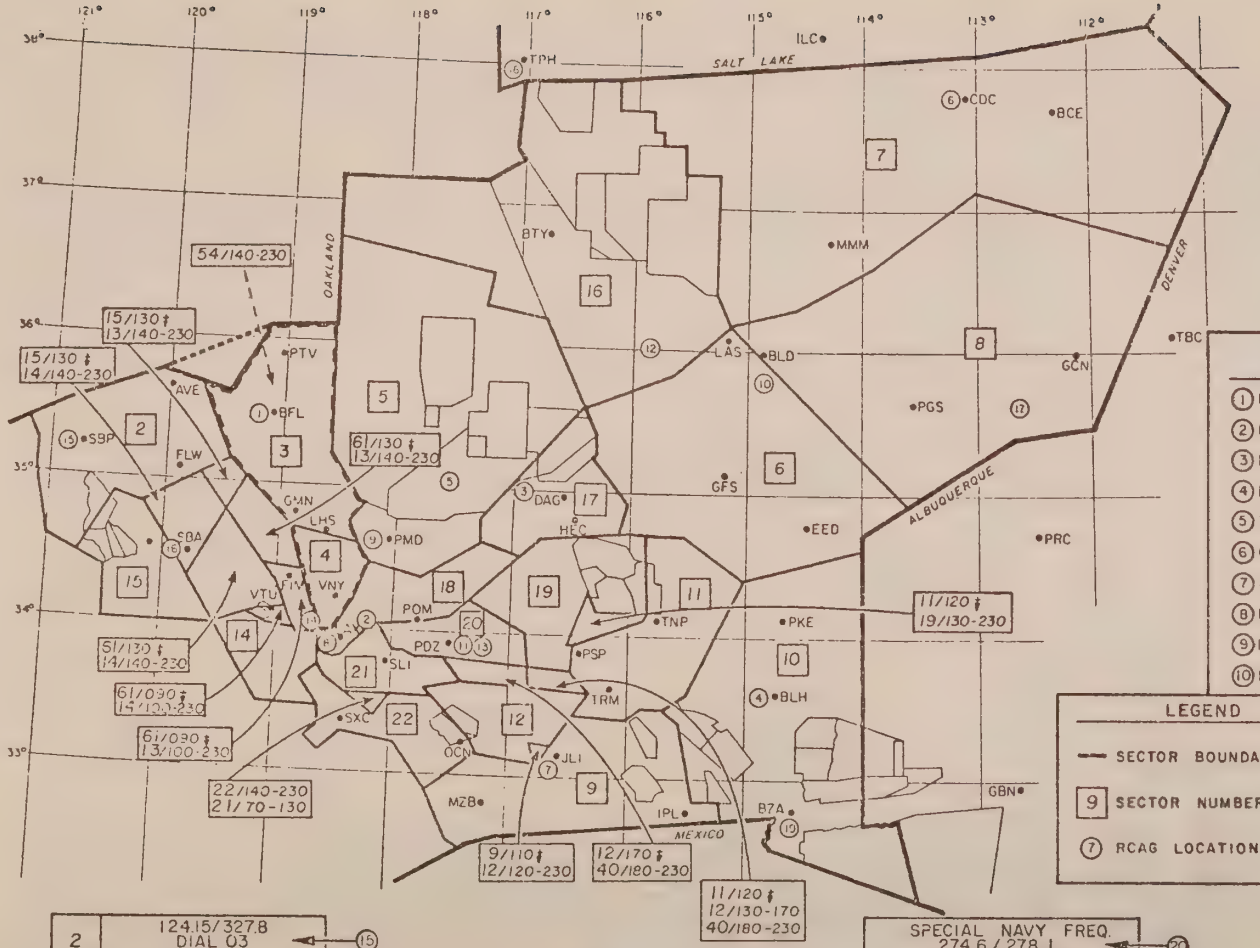
8. MICROWAVE LINK STATIONS (Flight Information CCTV)

Frequency	Station
2677	CLE,JFK,PDX,PHL

LOS ANGELES ARTC CENTER

—12-25-80—

LOW ALTITUDE SECTORS
FREQUENCY ASSIGNMENTS
DIAL CODE ASSIGNMENTS



REMOTE CONTROL AIR GROUND (RCAG) SITES

(1) BAKERSFIELD	(11) ONTARIO
(2) BALDWIN HILLS	(12) PANAMINT SPRING
(3) BARSTOW	(13) RIVERSIDE
(4) BLYTHE	(14) SADDLE PEAK
(5) BORON	(15) SAN LUIS OBISPO
(6) CEDAR CITY	(16) SANTA BARBARA
(7) JULIAN	(17) SELIGMAN
(8) LOS ANGELES	(18) TONOPAH
(9) LOS ANGELES ARTCC	(20) YUMA
(10) NELSON	

LEGEND

- SECTOR BOUNDARIES
- 9 SECTOR NUMBER
- (7) RCAG LOCATION

DIAL CODES SSI/DSS

22—ASSISTANT CHIEF
33—ASSISTANT CHIEF (EMER.)
44—SYSTEMS ENGINEER
66—MISSION COORDINATOR
77—FLOW CONTROLLER
99—DATA SYSTEMS COORD.
4/27—SUP A/FLIGHT DATA

2	124.15/327.8 DIAL 03	15
3	127.1/317.7 DIAL 62	1
4	125.8/307.1 DIAL 65	14
5	132.5/284.7 DIAL 24	3, 9
6	134.65/307.9 DIAL 46	10, 3
7	124.2/343.6 DIAL 50	6, 10

8	124.85/319.2 DIAL 56	10, 17
9	128.6/291.7 DIAL 40 326.7	7, 7
10	134.25/278.5 DIAL 98	4
11	133.4/285.6 DIAL 93	7
12	125.85/346.4 DIAL 05 312.3	7, 11, 7

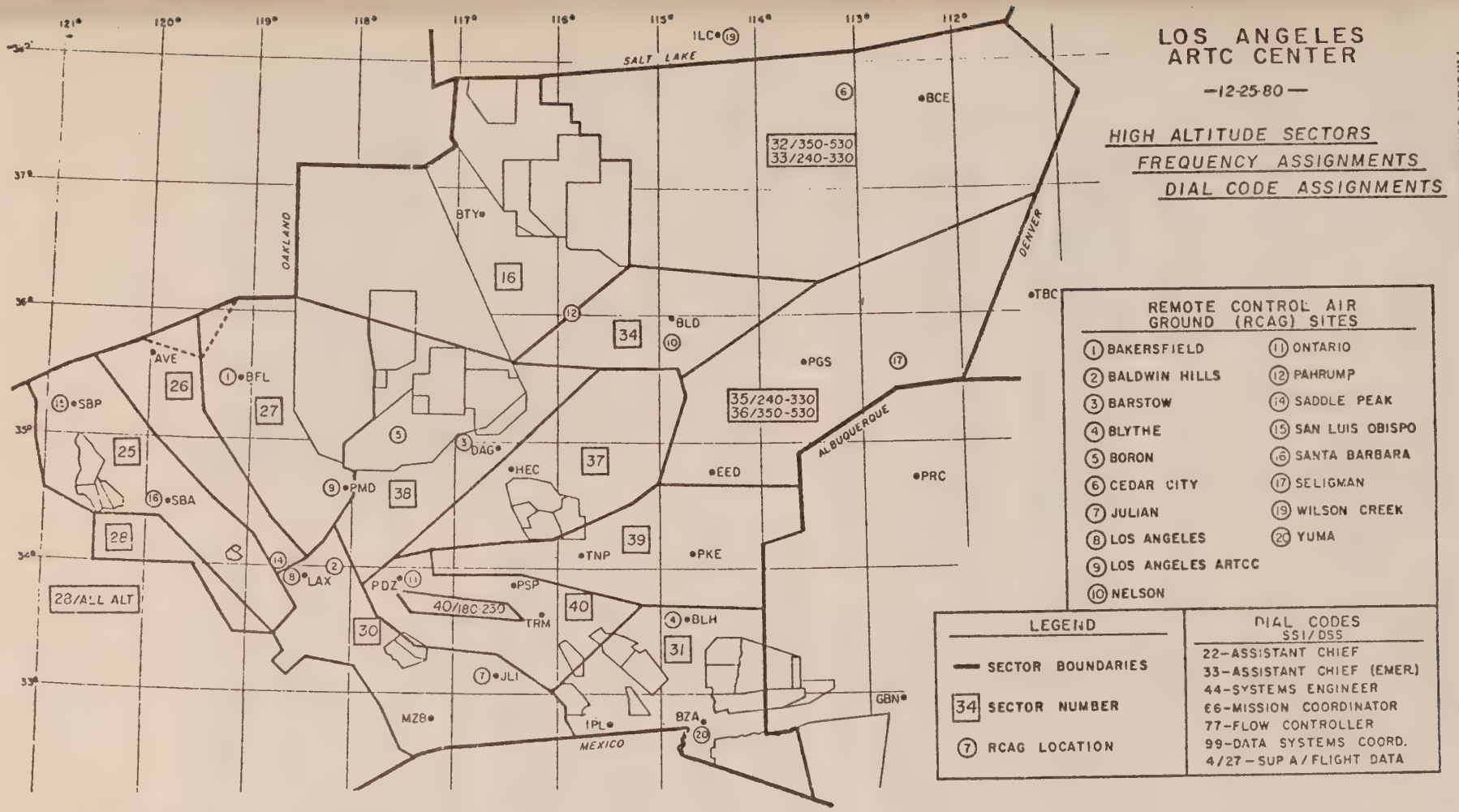
	SPECIAL NAVY FREQ. 274.6/278.1 312.3/326.7/276.3	20, 7, 14
13	132.6/351.8 DIAL 48	
14	126.4/350.3 DIAL 52	14
15	128.05/269.5 DIAL 06 134.85/306.2	15, 16, 1
16	134.7/377.1 DIAL 36	12, 18
17	132.3/317.4 DIAL 29	3

18	129.2/351.7 DIAL 30	2, 9
19	126.35/290.2 DIAL 49	3, 13
20	134.75/285.5 DIAL 67	8
21	132.85/322.4 DIAL 63	2
22	127.4/354.1 DIAL 76	8
54	133.05/257.9 DIAL 38	1, 8
61	135.5/327.1 DIAL 28	16

LOS ANGELES ARTC CENTER

—12-25-80—

HIGH ALTITUDE SECTORS FREQUENCY ASSIGNMENTS DIAL CODE ASSIGNMENTS



REMOTE CONTROL AIR GROUND (RCAG) SITES

(1) BAKERSFIELD	(11) ONTARIO
(2) BALDWIN HILLS	(12) PAHRUMP
(3) BARSTOW	(14) SADDLE PEAK
(4) BLYTHE	(15) SAN LUIS OBISPO
(5) BORON	(16) SANTA BARBARA
(6) CEDAR CITY	(17) SELIGMAN
(7) JULIAN	(19) WILSON CREEK
(8) LOS ANGELES	(20) YUMA
(9) LOS ANGELES ARTCC	
(10) NELSON	

LEGEND

- SECTOR BOUNDARIES
- 34 SECTOR NUMBER
- (7) RCAG LOCATION

DIAL CODES SSI/DSS

22—ASSISTANT CHIEF
33—ASSISTANT CHIEF (EMER.)
44—SYSTEMS ENGINEER
66—MISSION COORDINATOR
77—FLOW CONTROLLER
99—DATA SYSTEMS COORD.
4/27—SUP A/FLIGHT DATA

16	134.7/377.1 DIAL 36	(5) (12)
24	369.9 DIAL 92	(3) (6) (7) (10) (14)
25	134.4/343.7 DIAL 07	(16)
26	135.3/372.0 DIAL 53	(1)
27	134.025/263.0 DIAL 58	(1)

28	132.15/338.3 DIAL 09 128.3/257.9	(16) (8) (2) (7)
30	125.65/277.4 DIAL 83	
31	135.45/307.8 DIAL 86	(4)
32	135.55/299.2 DIAL 95 135.9/377.2	(6) (19)

33	135.25/306.3 DIAL 80	(6)
34	127.9/272.7 DIAL 84	(5) (12)
35	134.95/323.2 DIAL 85	(17)
36	127.35/346.3 DIAL 89	(6)

37	133.55/279.6 DIAL 37	(3)
38	135.575/351.9 DIAL 34	(3)
39	133.2/282.3 DIAL 70	(7) (17)
40	135.75/261.5 DIAL 68	(7)

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PILOT/CONTROLLER GLOSSARY

This Glossary was compiled to promote a common understanding of the terms used in the Air Traffic Control system. It includes those terms which are intended for pilot/controller communications. Those terms most frequently used in pilot/controller communications are printed in ***bold italics***. The definitions are primarily defined in an operational sense applicable to both users and operators of the National Airspace System. Use of the Glossary will preclude any misunderstandings concerning the system's design, function, and purpose.

Because of the international nature of flying, terms used in the "Lexicon," published by the International Civil Aviation Organization (ICAO), are included when they differ from FAA definitions. These terms are *italicized*. For the reader's convenience, there are also cross references to related terms in other parts of the Glossary and to other documents, such as the Federal Aviation Regulations (FARs) and the Airman's Information Manual (AIM).

This Glossary will be revised as necessary to maintain a common understanding of the system.

ABBREVIATED IFR FLIGHT PLANS—An authorization by ATC requiring pilots to submit only that information needed for the purpose of ATC. It includesonly a small portion of the usual IFR flight plan information. In certain instances, this may be only aircraft identification, location, and pilot request. Other information may be requested if needed by ATC for separation/control purposes. It is frequently used by aircraft which are airborne, desire an instrument approach, or by aircraft on the ground which desire a climb to VFR on top (See VFR ON TOP) (Refer to AIM)

ABEAM—An aircraft is "abeam" a fix, point or object when that fix, point or object is approximately 90 degrees to the right or left of the aircraft track. Abeam indicates a general position rather than a precise point.

ABORT—To terminate a preplanned aircraft maneuver; e.g., an aborted takeoff.

ACKNOWLEDGE—Let me know that you have received and understand my message.

ACROBATIC FLIGHT—An intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight. (Refer to FAR Part 91)

ICAO—ACROBATIC FLIGHT—Maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

ADDITIONAL SERVICES—Advisory information provided by ATC which includes but is not limited to the following.

1. Traffic advisories.
2. Vectors, when requested by the pilot, to assist aircraft receiving traffic advisories to avoid observed traffic.
3. Altitude deviation information of 300 feet or more from an assigned altitude as observed on a verified (reading correctly) automatic altitude readout (Mode C).
4. Advisories that traffic is no longer a factor.
5. Weather and chaff information.
6. Weather assistance.
7. Bird activity information.
8. Holding pattern surveillance.

Additional services are provided to the extent possible contingent only upon the controller's capability to fit them into the performance of higher priority duties and on the basis of limitations of the radar, volume of traffic, frequency congestion and controller workload. The controller has complete discretion for determining if he is able to provide or continue to provide a service in a particular case. The controller's reason not to provide or continue to provide a service in a particular case is not subject to question by the pilot and need not be made known to him. (See Traffic Advisories) (Refer to AIM)

ADMINISTRATOR—The Federal Aviation Administrator or any person to whom he has delegated his authority in the matter concerned.

ADVISE INTENTIONS—Tell me what you plan to do.

ADVISORY—Advice and information provided to assist pilots in the safe conduct of flight and aircraft movement. (See Advisory Service)

ADVISORY FREQUENCY—The appropriate frequency to be used for Airport Advisory Service. (See Airport Advisory Service and UNICOM) (Refer to Advisory Circular No. 90-42; AIM)

ADVISORY SERVICE—Advice and information provided by a facility to assist pilots in the safe conduct of flight and aircraft movement. (See Airport Advisory Service, Traffic Advisories, Safety Advisories, Additional Services, Radar Advisory, En Route Flight Advisory Service) (Refer to AIM)

AERIAL REFUELING/INFLIGHT REFUELING—A procedure used by the military to transfer fuel from one aircraft to another during flight. (Refer to Graphic Notices and Supplemental Data.

AERODROME—A defined area on land or water (including any buildings, installations, and equipment) intended to be used either wholly or in part for the arrival, departure, and movement of aircraft.

AERONAUTICAL BEACON—A visual navaid displaying flashes of white and/or colored light to indicate the location of an airport, a heliport, a landmark, a certain point of a Federal airway in mountainous terrain, or a hazard. (See Airport Rotating Beacon) (Refer to AIM)

AERONAUTICAL CHART—A map used in air navigation containing all or part of the following: topographic features, hazards and obstructions, navigation aids, navigation routes, designated airspace, and airports. Commonly used aeronautical charts are:

1. Sectional Charts—1:5000,000—Designated for visual navigation of slow or medium speed aircraft. Topographic information on these charts features the portrayal of relief, and a judicious selection of visual check points for VFR flight. Aeronautical information includes visual and radio aids to navigation, airports, controller airspace, restricted area, obstructions and related data.
2. VFR Terminal Area Charts—1:250,000 Depict Terminal Control Area (TCA) airspace which provides for the control or segregation of all the aircraft within the TCA. The chart depicts topographic information and aeronautical information which includes visual and radio aids to navigation, airports, controller airspace, restricted areas, obstructions, and related data.
3. World Aeronautical charts (WAC)—1:1,000,000—Provide a standard series of aeronautical charts covering land areas of the world at a size and scale convenient for navigation by moderate speed aircraft. Topographic information includes cities and towns, principal roads, railroads, distinctive landmarks, drainage, and relief. Aeronautical information includes visual and radio aids to navigation, airports, airways, restricted areas, obstructions, and other pertinent data.
4. En Route Low Altitude Charts—Provide aeronautical information for en route instrument navigation (IFR) in the low altitude stratum. Information includes the portrayal of airways, limits of controlled airspace, position identification and frequencies of radio aids, selected airports, minimum en route and minimum obstruction clearance altitudes, airway distances, reporting points, restricted areas, and related data. Area charts which are a part of this series furnish terminal data at a large scale in congested areas.
5. En Route High Altitude Charts—Provide aeronautical information for en route instrument navigation (IFR) in the high altitude stratum. Information includes the portrayal of jet routes, identification and frequencies of radio aids, selected airports, distances, time zones, special use airspace, and related information.
6. Area Navigation (RNAV) High Altitude Charts—Provide aeronautical information for en route IFR navigation for high altitude air routes established for aircraft equipped with RNAV systems. Information includes portrayal of RNAV routes, waypoints, track angles, changeover points, distances, selected navigational aids and airports, special use airspace, oceanic routes, and transitional information.
7. Instrument Approach Procedures (IAP) Charts—Portray the aeronautical data which is required to execute an instrument approach to an airport. These charts depict the procedures, including all related data, and the airport diagram. Each procedure is designated for use with a specific type of electronic navigation system including NDB, TACAN, VOR, ILS, and RNAV. These charts are identified by the type of navigational aid(s) which provide final approach guidance.
8. Standard Instrument Departure (SID) Charts—Designed to expedite clearance delivery and to facilitate transition between take-off and en route operations. Each SID procedure is presented as a separate chart and may serve a single airport or more than one airport in a given geographical location.

Beginners ?????? Corner

Have a question? If you are a new scanner listener and don't understand something about monitoring that almost everyone else seems to understand, send in your question. When possible, your question and the answer will be printed. No answers will be sent by return mail. Your name will not be printed. Write to: David E. Crowley, 7234 Balson Ave., University City, MO 63130.

Q. The tape-out audio signal from the (Radio Shack) PRO-2001 varies with the main volume control. Can I bypass the volume crontrol (potentiometer) to get a constant level from the tape jack?

A. This should be a simple modification. The exact method depends of where the volume control is situated in the audio circuit. If it's between the audio amplifier and speaker, the signal you want is at the "top" of this potentiomter. If you'll send me the schematic, I'll figure out the modification and publish it in future column. As I said, it should be simple.

Q. I want to make a Nicad battery back with 16 D cells. Can you help me with the recharging current and related electronics?

A. I'm not an expert with Nicads for which charging current, etc., can be very tricky, especially when dealing with the "memory problem." If another reader wants a shot at the appropriate circuit, send it in and I'll print it. You may be better advised to get the 19.2 volts from a "Gel" battery, which can be obtained from Herbach and Rademan, Inc., 401 East Erie Avenue, Philadelphia, PA 19134 (215) 426-1700.

Comment for the month: The March 1981 issue of Communications contains good descriptions of both 800 MHz trunked systems and the amplitude compandored single sideband modulation tecknique. These articles are pitched to readers with some electronic background, but certainly not expertise. Communications is a trade publication dealing exclusively with two-way mobile radio, and is available for $14.00/year to P.O. 1077, Skokie, IL 60077. The overall quality of its technical articles is very good, but there is the occaisional annoyance of scrambled pictures, photos and captions. My subscription is free: apparently I sent in enough reader service cards from other trade publication to trigger Communications. Anyway it appeared magically in my mailbox two or three years ago, and is still arriving faithfully every month.

CANADA

Send Canadian frequency information, radio system details, other information relating to Canadian monitor radio listening, and questions to: Robert Berezowski, 5832 Dalhousie Drive NW, Calgary, Alberta T3A 1T1 Canada.

Welcome to the Canada column for June. To start off I would like to print some information that I received from Chris (CAN-061). He supplied a news release from the Ontario Ministry of Health dated January 26. I don't have room to print it all, but here are some excerpts:

> Ontario plans to spend $15 million this year for major improvements in health services in Northern Ontario. The program involves an air ambulance network and tele-medicine links. Two helicopters and two aircraft will be

acquired and converted to full-time ambulance use. The helicopters will be based at Sudbury and Thunder Bay while the airplanes will fly out of Timmins and Sioux Lookout. The telemedicine links are two-way audio-visual links between small community hospitals and large metro hospitals. They will assist in diagnosis and treatment of patients.

The program also involves other aspects of health care that are not related to this column. Also included was a fact sheet on the ambulance helicopters which I may publish later if I have the room. If anyone is interested in the helicopter fact sheet, I will supply a copy to anyone writing in to me.

Again for you bookworms here are some publications that I feel may be worth checking out.

Radio Aids to Marine Navigation (Atlantic & Great Lakes edition and Pacific edition). Both are 75¢ each and available from Supply and Services Canada, Ottawa. I don't have a more complete address but apparently that will get it there. If someone does have the complete address, please send it to me.

Table of Frequency Allocations. $4.00 from Supply and Services Canada, Ottawa. Catalogue C023-1/1978-1.

Aeronautical Communications Lexicon Volume 1. They are free and available from Public Affairs, Ministry of Transport, Ottawa, Ontario K1A 0N5. Ask for catalogue No. T52-55/1980.

Aeronautical Communications Phraseology Volume 2. This is also free and available from the same address as above. The catalogue No. is T52-56/1980.

From Guy (CAN-031) comes this list of RCMP:

141.740 / 148.090	Alta & Man
141.740 / 148.165	Carlyle, Sask
142.040 / 148.360	Red Deer, Alta & Sask
142.040 /148.960	Man
142.880 / 149.860	Red Deer, Alta & Swift Current, Sask & Dauphin, Man
143.085 / 148.075	Alta
143.090 / 148.915	Crossfield, Alta
143.090 / 148.960	Lavoy, Alta
143.090 / 148.360	Valleyview, Alta
143.090 / 148.075	Alta
143.205 / 148.255	Alta
143.205 / 148.285	Max Lake, Man
143.205 / 148.015	Man & Swift Current, Sask
143.205 / 148.360	Spearhill, Man
143.205 / 148.090	Sask
143.295 / 148.165	Sask
143.325 / 148.915	Nordegg, Alta
143.325 / 148.765	Man & Sask & Pincher Creek, Alta
143.325 / 148.090	Alta
143.325 / 148.285	Divide, Sask
143.480 / 148.660	Sask
143.480 / 148.405	Denholm, Sask
143.535 / 148.525	Alta
143.535 / 148.960	Weber Valley, Alta
143.535 / 148.165	Man
143.535 / 148.090	Sask
143.565 / 148.405	Man & Sask
143.565 / 148.090	Carrot River, Sask
143.565 / 148.360	Sask
143.715 / 148.360	Man & Divide, Sask
143.715 / 148.660	Sask

143.775 / 148.765	Alta & Morris,Man
143.775 / 148.615	Edmonton,Alta
143.775 / 148.075	Lethbridge,Alta & Biggar,Sask & Spearhill,Man
143.775 / 148.285	Man & Sask
143.900 / 148.090	Alta
138.345 / 142.335	BC
138.465 / 140.190	BC
138.525 / 139.245	BC
138.585 / 139.320	BC
138.675 / 139.410	BC
138.765 / 139.500	BC
138.885 / 139.590	BC
138.945 X	BC
139.080	VANCOUVER,BC
139.140	BC
139.185	BC
139.215	BC
139.260	BC
139.290	Vancouver,BC
139.350	Vancouver,BC
139.440	Surrey,BC
139.470	Vancouver,BC
139.530 / 140.100	BC
139.560 / 141.765	Vancouver,BC
139.560 / 138.825	BC
139.620 / 140.130	BC
139.650 / 140.640	Haney,BC
139.680 / 140.670	Vancouver,BC
139.740	Vancouver,BC
139.770	Chilliwack,BC
139.920	Vancouver,BC
140.130	Vancouver,BC
140.310 / 141.510	BC
140.370 / 141.540	Victoria,BC
140.400 / 141.570	BC
140.430	BC
140.610 / 141.660	BC
141.150	BC
141.180	Victoria,BC
141.210	BC & Victoria,BC
141.240	BC & Victoria,BC
141.300	BC

Also from Guy comes this list of non-classified DND aeronautical frequencies:

CFB Bagotville,PQ	
(radar) TML:	127.2 227.6 384.5 121.5 243.0
TWR:	126.2 236.6 337.7 121.5 243.0
GND:	121.7 275.8
A/G:Base Ops	264.6
ATIS:	257.7
RADAR:	119.0 134.1 283.7 289.4 295.6 349.4 378.5 121.5 243.0
CFS Alert,NWT	
A/G:	126.7
CFB Chatam,NB	
(radar) TML:	123.7 264.6 346.9

	121.5 243.0
TWR:	126.2 226.4 236.6
	121.5 243.0
GND:	275.8
PMSV(Wx):	344.6
RADAR:	134.1 279.8 289.4
	336.0 378.5 121.5
	243.0

CFB COLD LAKE, ALTA

(radar) TML:	120.6 322.8 121.5
	243.0
(radar) ARR:	134.1 279.8 289.4
	294.6 336.0 350.5
	378.5 121.5 243.0
TWR:	126.2 226.5 236.6
	121.5 243.0
GND:	121.9 275.8
(radar) DEP:	120.6 322.8 243.0
CLNC DEL:	120.6 322.8
ATIS:	260.0
A/G: Base Ops	340.2
PMSV(Wx):	344.6
RADAR:	119.4 134.1 279.8
	289.4 294.6 336.0
	378.5 121.5 243.0

There will be more from both lists next month. I thought I would finish off with some information on the Ontario Ministry of Natural Resources. The chart was supplied by J.B. Rae (CAN-019). It is an updated version of the list I previously published. It should help at this time of the year because the fire season is approaching. With that I will close and wish you the best until next month.

ONTARIO MINISTRY of NATURAL RESOURCES - RADIO COMMUNICATIONS NETWORK

COMMON (Province Wide FIRE

46.70 & 46.74

Freq.	Region & District
46.88	NORTHWESTERN REGION
46.62	Fort Frances
46.64	Ignace
46.68	Kenora
46.78	Dryden
46.84	Red Lake
46.86	Sioux Lookout
46.94	NORTH CENTRAL REGION
46.62	Terrace Bay
46.68	Geraldton
46.78	Nipigon
46.82	Atikokan
46.84	Thunder Bay
46.86	White River
46.88	ALGONQUIN REGION
46.62	Bancroft
46.64	Parry Sound
46.78	Algonquin Park
46.82	Pembroke
46.84	Bracebridge
46.86	Minden

Freq.	Region & District
46.88	NORTHERN REGION
46.62	Kapuskasing
46.64	Moosonee, Chapleau
46.68	Timmins
46.82	Cochrane
46.84	Hearst, Kirkland Lake
46.86	Gogama
46.72	NORTHEASTERN REGION
46.62	Sudbury
46.64	Temagami
46.68	Wawa, North Bay
46.78	Espanola
46.82	Sault Ste. Marie
46.84	Blind River
	EASTERN REGION
46.64	Brockville, Cornwall, Ottawa, Napanee, Tweed, Lanark
	CENTRAL REGION
46.82	Huronia, Cambridge, Lindsay, Maple, Niagara

SOUTHWESTERN REGION

46.68 Aylmer, Chatham, Owen Sound, Wingham, Simcoe

PROBABLE CHANNEL ASSIGNMENTS

The Ministry apparently uses four channel radios with frequencies assigned as follows:

F1 DISTRICT FREQUENCY
F2 FIRE ONE (46.70)
F3 FIRE TWO (46.74)
F4 REGION FREQUENCY

V.H.F. AERONAUTICAL BAND

Common (Province Wide)	- Air to Air Fire Control	Primary	122.700 MHz
	- Air to Air Fire Control	Secondary	123.200 MHz
	- Air to Ground and Tanker Base		122.900 MHz

H.F. BAND

Province Wide	- Air to Ground	5540 KHz (SSB)
	- Long Distance	9172 KHz
Northwestern Region		4460 KHz
North Central Region		4535 KHz
Northern Region		4880 KHz
Northeastern Region		4880 KHz
Algonquin Region		4880 KHz

contact/info wanted

This column has two purposes: to help members contact each other, and to help members obtain information directly from one another on various subjects related to 2-way communications monitoring. If you desire to converse, meet, or correspond with other members by telephone, letter, or cassette tape in a certain geographic area or with members who have similar listening interests, this is the perfect place for you to make your desires known. Remember--those who respond will do so directly, so be sure to provide your phone number, the best time to be called, or your address.

Write to: John W. Darr, P.O. Box 1652, Cheyenne, WY 82001

10-CODE LIST SWAP: New York member will trade his Xeroxed list of New York City fire, housing, and police 10-codes for yours. He wishes to collect all major city and state codes, as above. [2-25-81]

MICHAEL WRIGHT (NY-Ø67), 1414 East 15th Street, Brooklyn, NY 11230

EXCHANGE INDIANA FREQS: Member would like to exchange frequency and radio system information for the area north of Indianapolis regarding police, fire, medical, local government, utilities, federal government, or any other service on VHF hi or lo, or UHF. [3-1-81]

MARK JONES (IN-Ø14), 507 West Hill St, Wabash, IN 46992

SOUTHERN CALIFORNIA FREQS: Here's a member who is looking for a lot of specific frequencies. He would appreciate learning the following: San Onofre Power Plant; any motion picture studio; the following newspapers -- LA Times, Santa Ana Register, Herald Examiner, Daily News (except Valley News), and the following miscellaneous frequencies -- Brea Mall, Anaheim Plaza, Anaheim Convention Center, Associated Bus Lines, Alpha Beta Plant in La Habra, The Forum in LA, the Greek Theatre in LA, the

Hollywood Bowl, Marineland, Anaheim Memorial Hospital, St Jude Hospital in Fullerton, and Loyola Marymount University in LA. [3-3-81]
ROBERT A STOFFEL (CA-OR-Ø26), 1337 West Ave, Fullerton, CA 92633

FLORIDA TAPE WANTED: Member wants to exchange your cassette tape of Dade County, Florida, police agencies, especially the Metro Dade County Public Safety Department. In turn, he will provide a tape of his local police agencies -- or will supply blank tape and all postage. [3-4-81]
SCOTT MILTNER (FL-Ø69), 301 87th Ave, St Petersburg Beach, FL 33706

YONKERS NY INFO: Another member would like to learn the Yonkers, NY, police radio assignments and codes. He will exchange for the Westchester County police codes and Westchester County fire codes, upon request. [3-6-81]
BOB MILO (NY-144), 117 Fenimore Rd, Mamaroneck, NY 10543

CHICAGOLAND FREQ LIST: Chicago-area member is compiling a "Chicago Area Frequency List" that he hopes will show what is not included in other directories. Needed is info on Public Safety Agencies - Suburban, indicating frequency use, unit numbers, and complete list of codes. Also needed are business freq lists for the Chicago area. [3-6-81]
BRANDT I NIEMUTH (IL-Ø84), KIL9FO, P O Box 541, Rosemont, IL 60018

COLLECTING 10-CODES: New York City member needs (for collection) clean, clear Xerox copies of the following 10-codes: Nassau, Suffolk, Westchester County PD; NY State Police, U.S.C.G., U.S. Park Service PD; Nassau, Suffolk, Westchester FD/EMS; NY/NJ Port Authority PD, NYC Transit PD. Will exchange his NYC FD/EMS/Housing/PD codes, plus postage you spent, to each respondent. [3-12-81]
MICHAEL WRIGHT (NY-Ø67), 1414 East 15th St, Brooklyn, NY 11230

NYC METRO RCMA CHAPTER: Several NYC members are considering forming a NY Metro Chapter with once-a-month get-togethers, communications facilities tours, and buy/sell/swap equipment meets are part of what they plan to make happen. Soliciting comments and suggestions from any NY, NJ, CT members. Would also like to hear from members in other areas of the country who are actively involved in local chapters. Your comments can be of benefit, too. [3-12-81]
MICHAEL WRIGHT (NY-Ø67), 1414 East 15th St, Brooklyn, NY 11230

LA MOBILE-PHONE/RCC DATA: New member is looking for info -- freqs and such -- for mobile-phone/RCC in Los Angeles area. [3-17-81]
CAROLYN L KLIMA (CAVE-Ø22), 131 James Dr, Apt A, Ventura, CA 93001 // (805) 648-7120

VACAVILLE CALIFORNIA INFO: New listener-member, moving soon to Vacaville, desires frequencies for that area. Will trade Vacaville-area police, fire, rescue and prison frequencies for her Monterey Bay-area freqs. [3-20-81]
BARBARA PAULEY (CAMO-ØØ3), P O Box 873, Pebble Beach, CA 93953

PUBLIC SAFETY RADIO CODES & SIGNALS: Member wants listing of any and all public safety radio codes and signals and listing of any and all public safety and other (business, etc.) frequencies for various areas. He will reciprocate with any requested info he can supply. [3-20-81]
JEFF HOWELL (KY-Ø23), P O Box 237, Milton, KY 40045

KENTUCKY STATE POLICE INFO: Looking for specific information on the Kentucky State Police system. He really wants a listing of Kentucky's radio codes and signals which are non-standard from APCO and others. And he'll reciprocate where possible. [3-20-81]
JEFF HOWELL (KY-Ø23), P O Box 237, Milton, KY 40045

MONITORING LAWS WANTED: Same member looking for copies of any and all state monitoring laws that exist! He will pay cost of copying and/or postage, if desired. Can reciprocate with monitor laws of Indiana. [3-20-81]
JEFF HOWELL (KY-Ø23), P O Box 237, Milton, KY 40045

[Editor's note:
Jeff, wanna be the Monitoring and the Law editor? Write Chuck Gysi!]

RECRUITING WORLD-WIDE FOR SEARCH & RESCUE VOLUNTEERS: Needed -- RCMA members who might want an appointment in the communications (or any other) area in a non-profit volunteer Search and Rescue organization. Need personnel across the U.S., as well as in other countries, to help administrate growing national SAR organization. If interested, write the Lifeline Search and Rescue Executive Director. [3-20-81]
JEFF HOWELL (KY-Ø23), P O Box 237, Milton, KY 40045

(Whew!)

PAGING GAINESVILLE GEORGIA-AREA MONITORS: Here's a member who wants someone in the Gainesville, Georgia, area with whom to swap frequency/code/signal information. [3-21-81]
JEFFERY HOOPER (GA-Ø27), Rte 3, Box 91, Blairsville, GA 30512

ATTN: BAY-AREA MONITORS Here's a question that is becoming more and more common, with this one coming from Richard Backlund, P O Box 361, Alviso, CA 95002: "Is there a scanner club in the San Jose or San Francisco area?" Yes, Richard, there is, indeed. For you and all the others in that vicinity, here's the poop, as provided by Gary Mondfrans (CA-SM-ØØ9), the club's past president. He receives mail at 990 El Camino Real, San Bruno, CA 94066 -- phone (415) 583-1033. Here is what Gary has to say: "...the Bay Area Scanners Club has been meeting regularly since 1977. The meetings are held the second Tuesday of each month in the Community Room of Western Federal Savings & Loan, Bayhill Shopping Center here in beautiful downtown San Bruno...For more information contact the Club at P O Box 534, Brisbane, CA 94002..." 10-4?

ATTN: LI & NYC MEMBERS If you'd like to be included in the L. I. sociable-member directory, send your name, address, and phone number ASAP to the address below. In months to come, he may use the info to form a "Nassau County-New York RCMA [Chapter]? The chapter will have members from NY, NJ, and CT. And -- if you'd like to help in this big task, please let yourself be known. Send an S.A.S.E. to learn about receiving your copy. [3-23-81]
EDDIE MURO (NY-Ø41), P O Box 318, Woodmere, NY 11598

HELP ID A FREQ? Does anyone know the purpose of the following tone signals: Santa Clara County 460.550 MHz and Sunnyvale 482.412 MHz (both in California)? [3-23-81]
RICHARD BACKLUND (UT-ØØ3), P O Box 361, Alviso, CA 95002

OUT-OF-BAND HELP NEEDED: Here's a member who would like to know if anyone has information as to how to program a Radio Shack Pro-2001 scanner for frequencies outside the normal bands available. Such information has been published for scanners manufactured by Regency (e.g., decimal before entry of desired frequency) and Bearcat, but he has seen none for the RS unit. He's interested in direct entry of out-of-band freqs, as opposed to use of image freqs within the established bands. [3-26-81]
CHARLES CAMPBELL (OR-Ø15), 114 Alberta Lane, Eugene, OR 97404 // (503) 688-5229

FCC TOPICS

By George DuBois, Editor

Send FCC news and information of interest relating to two-way communications above 30 MHz, as well as questions regarding the FCC Rules and Regulations, to: George DuBois, 10048 NE Campaign, Portland, OR 97220.

In response to a petition, the FCC has proposed allowing interservice sharing of frequencies below 470 mHz. This means that a potential user, upon a showing that all available channels in its' own service are assigned, would be able to select a frequency allocated, but not assigned, to another service. Interservice sharing would only be allowed within the services' own category. Public Safety radio service users and governmental entities in the Special Emergency Radio Service would only be able to select from any channel available to that group. Likewise, eligibles in the Industrial Radio Services could apply for any frequency available to these services. Presently, a waiver action or a rulemaking proceeding is required for an out-of-service assignment. This probably won't drastically alter our tuning habits, since in urban areas, most available channels are already assigned. A good example of the need for this change would be a Forest Products Radio Service user in rural Oregon selecting from vacant VHF Power Radio Service or Taxicab Radio Service channels. Or vice versa in New York City, I suppose.

A Final Order was issued allocating 20 frequency pairs in the Private Operational Microwave Service for automated utility distribution systems (load shedding, etc.). The channels for "remote" stations are from 928.3625 through 928.8375 mHz in .025 increments and, for "master" stations, from 952.3625 through 952.8375 mHz. The mileage separation between systems on the same channel must be at least 70 miles and upon a showing of need, two adjacent channels may be assigned, providing 50 kHz bandwidth. Also, on a case-by-case basis, the Commission may allow "mobile master" stations on a non-interference basis, for automated meter reading.

Everybody wants a piece of the pie at 900 megs, so concurrent with the above allocation, a Third Notice of Proposed Rulemaking was released. This proposal will make frequencies available to the other Public Safety and Industrial users (besides the Power Radio Service), and to Common Carriers, for multiple address systems. Suggested uses were for central alarm stations, railroad yard classification systems, traffic light control and oil and gas production field monitoring. Radio Common Carriers stated they need frequencies for remote radio control of simultaneously-keyed paging transmitters. Presently only the 72 mHz and 2100 mHz bands are available to RCCs in most urban areas and they are only for point-to-point use, not multiple addressing. Fourteen paired channels (928.0125-928.3375 and 952.0125-952.3375 mHz) and eight unpaired channels (956.2625-956.4375 mHz) would be available for use in the Private Operational Fixed Service. Twelve unpaired channels (928.8625-928.9875 plus 959.8625-959.9875 mHz) would be for Common Carrier use in wide-area paging operations. An RCC could select from the Industrial Private Fixed channels if all the RCC channels are assigned. Conversely, a Private-Fixed user could select from the RCC channels, if all 14 pair (and/or eight single channels) were filled. And a Power Radio Service user could select from the Industrial channels when the channels just allocated to them are exhausted. The Commissions intent is to provide maximum flexibility in the availability of frequencies.

The National Association of Business and Educational Radio, Inc has petitioned the FCC to reallocate unused channels in other services for use in the Business Radio Service in Detroit, Mi. A 1977 usage study by the Commission was cited, which indicated that 76 frequencies had little or no use in the area. Of these, the VHF frequencies have adjacent-channel assignments which would prohibit their use, and, as of 1980, only four UHF channel pairs remain unlicensed within 75 miles of Detroit. These are 451.55 and 451.7, which are allocated to the Petroleum and the Forest Products Radio Services, and 451.525 and 451.675 which are shared with other Industrial services. T-band (470-512) and 806-866 mHz channels are allocated in Detroit, but are not assigned pending an agreement with Canada. Since Detroit is the fourth largest metropolitan area in the country, the Commission in proposing reallocation of these channels, on a shared basis, in the Business Radio Service and allowing permanent use of the itinerant frequencies, 464.5 and 464.55.

The FCC has proposed that any future assignments on the Special Emergency Radio Service paging frequency 152.0075 be on a secondary, non-interference basis to Radio Common Carrier stations on 152.03 mHz. Telocator of America, representing the RCCs, had requested that no more assignments be made on the frequency. The Commission is taking the compromise position since the possibility of interference to RCC mobile units does exist, while at the same time four other frequencies will be available for Special Emergency paging at 453 mHz.

Action is iminent on a number of other matters, including "cellular" mobile telephone use at 825-845 and 870-890 mHz, and the allocation of spectrum at 220 mHz for an Inland Waterways Communication System along the Mississippi River, which I'll detail next month.

72-76 mHz Revisited

I got a note from Mike Musick, who lives in Whittier, Ca. regarding the 72 mHz article a couple months ago. First off, he says that 3 railroads use fixed links in the band, but I forgot to ask him who or where. Secondly, he says that, with railroads at least (his area of expertise), all mobile use in the band is for handheld remote control transmitters for large overhead cranes. Further, he believes that all mobile use in the band is probably for this purpose, since all of the eligible services are users of heavy equipment.

Well, I looked through the license microfiche and I'd guess that about 70 to 75% of the licenses in the band are for fixed service, remote transmitters or receivers, point-to-point, fire callboxes, etc. Of the remainder, it does look like the majority are indeed licensed for F2 or F9 emission. Almost all are big steel companies. Here's what the FCC Rules say in regard to mobile use in the band:

> **The maximum transmitter output power that will be authorized is 1 watt; and each station authorized will be classified and licensed as a mobile station. Any units of such a station, however, may be used to provide the operational functions of a base or fixed station. The antennas of transmitters operating on these frequencies must be directly mounted or installed upon the transmitting unit: Except that when permanently installed aboard a vehicle, antenna and transmitter may be separated as required for convenience in mounting. Horizontal polarization will not be allowed; and the gain of antennas employed shall not exceed that of halfwave dipole. The maximum bandwidth that will be authorized is 20 kHz. Tone control transmissions are permitted.**

As I said in the first article, you'll probably find little mobile (voice) use in the band nowadays, especially in the last decade, with the availability of low(er) cost UHF handheld radios. Also, 72 mHz radios would be incompatible with a VHF-hi or UHF system, if one was also used. But nothing in the Part 90 excerpt above, other than the last line, would indicate the actual activity in the band these days. In fact, I wonder how many of the voice licenses in the microfiche do actually use the band for portable use anymore.

FEDERAL GOV'T and ☆ MILITARY ☆

Robert B. Grove, Editor

Send all Federal Government and Military frequencies (including those of military aircraft), radio system details, and related questions to: Robert B. Grove, Route 1—Box 156, Brasstown, NC 28902. Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

PUBLISHING SENSITIVE FREQUENCIES: PRO AND CON

This will probably be the last time we will address this question with any detail. Excellent arguments on both sides have been presented by many members, and the breakdown is basically like this:

For publication: 1. Anyone with a scanner can uncover the frequencies anyway.

2. There are many private sensitive frequency publications now available on the market.

3. The bad guys can find the frequencies anyway if they want to.

Against publication: 1. Why make it even easier for the bad guys?

2. It has taken us a long time to painfully search these out; why indiscriminately propagate them?

3. RCMA would get a bad name from legitimate members and law enforcement agencies.

4. Such widespread dissemenation would merely speed up scrambling and encryption.

5. Such divulgence is against present club policy.

In view of these observations and criticisms, I have decided, at least in my own column, to abide by the club's previous dictum and be on the conservative side. Members are free to divulge to each other all the frequency lists that they wish to, and ordinarily when members contribute sensitive listings to me I try to assist them where I can. But I will refrain from the wholesale distribution of sensitive information -- at least for the time being, unless club philosophy changes radically.

I would like to express my warmest appreciation for the carefully chosen expressions of sincere insight which our members have provided me over the last few months in reference to the question.

DIPLOMATIC COMMUNICATIONS:

In a previous column, we asked what arrangements are made for foreign dignitaries in this country to use two-way radio, and similarly for our own dignitaries in foreign countries. Walt (CA-OR-129) shares some of his insight. Secret Service or State Department Dfficials arrange to loan radio equipment and assign code names to visiting officials before they arrive: Most countries cooperate. USSR and East German Officials carry their own radio net wherever they go. Our NSA monitors these communications carefully!

Non-official foreign delegations such as the olympic teams may rent American radios or bring their own. East Germans used their own radios which were monitored on our FM broadcast band, much to the delight of resident listeners at Lake Placid!

US Emissaries overseas make similiar arrangements, although our embassies and consulates are considered foreign territory and we do much as we please within their walls.

Thank you very much, Walt, for sharing this information with me and our readers!

NUCLEAR SHIPMENTS:

For years, fission-grade nuclear materials have been shipped throughout the United States by truck and rail. These shipments are protected by a follow-up car (actually a highly armored and paneled truck). Radio communications uses both HF single sideband (10 channel) and VHF communications.

The shippers pass through 33 states and are controlled by the NRC Nuclear Regulatory Commission. Incidently, all of these frequencies are listed in the Federal Frequency Directory -- they are not classified!

UHF AIRCRAFT RECEPTION:

The Grove Enterprises 225-400 MHz military/government aircraft receiver is nearly ready for production. If your name is on our catalog mailing list, you will receive an announcement soon.

Larry Smith of Royal Oak, Michigan sends these UHF frequencies in use in the Michigan and Northern Ohio areas:

SELFRIDGE ANGB:

372.2	PILOT TO DISPATCHER
395.9	APPROACH CONTROL
318.2	APPROACH CONTROL
340.7	TOWER
275.8	GROUND CONTROL
395.9	DEPARTURE CONTROL
381.0	RESCUE
314.2	927 TAG OPERATIONS
342.5	PILOT TO METRO SERVICE: METRO

WURTSMITH AFB:

372.2	PILOT TO DISPATCHER
301.5	APPROACH CONTROL
363.8	APPROACH CONTROL
275.8	GROUND CONTROL
395.0	DEPARTURE CONTROL
301.5	STAGE II RADAR SERVICE
321.0	COMMAND POST
342.5	PILOT TO METRO SERVICE: METRO

CLEVELAND CENTER:

369.9	DETROIT REMOTE (LOW ALTITUDE)
354.1	DETROIT REMOTE (HIGH ALTITUDE)
335.6	DETROIT REMOTE (DISCREET)
369.9	SAGINAW REMOTE (LOW ALTITUDE)
351.9	SAGINAW REMOTE (HIGH ALTITUDE)
307.8	SAGINAW REMOTE (DISCREET)

DETROIT CITY AIRPORT:

*255.4	RADIO
363.2	APPROACH/DEPARTURE CONTROL
*257.8	TOWER

DETROIT METROPOLITAN AIRPORT:

363.2	APPROACH CONTROL
287.1	METRO TOWER
348.3	DEPARTURE CONTROL
363.2	RADAR

Thanks Larry.

IRANIAN HOSTAGE COMMUNICATIONS:

Several members have reported hearing communications related to Freedom I, the aircraft carrying the hostages out of Iran. One member indicates he heard Freedom I working Crown (White House

Communications Agency) and the US State Dept. on 13215 USB. This frequency is one of dozens authorized under the "Mystic Star" VIP communications network of the US Air Force. Yes, this frequency is also in the Federal Frequency Directory!

KEEP UP TO DATE:

One of the most informative publications I have ever seen is issued every two weeks by editor Fred Maia W5YI P.O. Box 10101, Dallas, TX. 75207.

His excellent newsletter covers all aspects of radio communications, although emphasizing ham radio. The issue in front of me discusses topics like computers disrupting labor relations, Videotext systems, changing TV viewing habits with satellites and pay TV, 3-D X-ray movies, speech recognition and voice actuated typewriters, high definition television and the future of radio communications.

Send for your free review copy now, and tell him Bob Grove sent you!

WHERE HAS THE FBI GONE?

Member Bob Wells and others have shown concern over the virtual disappearance of communications on many of the most popular FBI frequencies. Does any of our members know whether there is a concerted effort in the Justice Department to rearrange channelization procedures among different cities in an effort to elude listeners?

Robert (WI026) notes that when the Milwaukee Fire Dept. strike threatened city-wide security, the National Guard was called in and used their own radio equipment.

He also notes that the FAA office at Mitchell Field in Milwaukee was setting up wind telemetry units. Frequencies he reports are 165.7625 (transmit) and 169.375 (receive).

Robert closes with this anecdote: When the FAA officials were approached by an RCMA member who queried them about the little units and admitted to receiving their signals, an engineer replied, "We don't even have the system operational yet and we have a fan club!" Thanks for sharing, Robert.

And finally, Wayne (CA-LA-119) enclosed a wire service copy, indicating the amusement shared by the patrons of the Casino De Paris when the topless dancers were in full regalia and suddenly secret service communications came bursting through the sound system! It seems that President Carter had stopped over night at the Palace Versailles, and his agents were using communications on the same frequency allocated in France to the Wireless Microphone Service! Thanks, Wayne, for this nice little tidbit.

Bruce (DE-006) asks if any members knows the identification of a tactical communication he monitors as "Phily (or Filly ...ed?) 3"to "Phily" or "NFC 705". He monitors this on 162.375, but I'm afraid I am not of much help in his area on this one.

Audy (KS-014) indicates that the Federal Protection Service (GSA) in Kansas City is on 415.200 (KCA 762). Thanks Audie.

Jeff (GA-027) spends much of his hobby time chasing Army Rangers through the woods of Camp Merrill, Dahlonega, Georgia. They practice on Federal land in that area and he is able to get up close with impunity.

He notes that two frequencies which occasionally are used are 39.30 and 67.50 MHz. Any call signs and frequencies are issued on a day-to-day basis, a sample of which is shown below:

CALL SIGNS

STATION	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
OPNS	Z6B90	05N22	A3Z23	L4A24	
OPNS/AL+	Y4B91	M8A66	C6W22	L4A24	

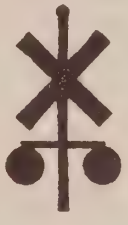
	FREQUENCIES				
OPNS	49.95	49.00	49.50	49.95	49.00
OPNS/AL+	40.20	41.00	40.70	40.20	41.00
MEDEVAC					
EMERGENCY	40.00	40.00	40.00	40.00	40.00

CHALLENGE/PASS WORD

DAY 1	DAY/MOVER
DAY 2	GRAY/HAWK
DAY 3	RULER/MOLE
DAY 4	BLACK JACK/GALLOW
DAY 5	APPLE/KNOB
DAY 6	MUSKET/LOCK

Thanks, Jeff, and good luck in your new career with the Army Military Police!

And thanks also to the many contributors for this month's column. Won't I see more of you in here next month?



Railroads

Ken Fitzgerald, Editor

Send information about railroad frequencies and their uses, radio system details, tips for monitoring railroads, explanations of railroad jargon, and related information and questions to: Ken Fitzgerald, 121 East Hackberry, Enid, OK 73701.

Hello for May. By the time you read this, I should finally have copies of the Southern Pacific and Union Pacific PBX lists in the mail to all those members who requested them as long as a year ago. Once again I apologize for the delay, but I have updated and revised the information greatly. If anyone out there who wrote in for a copy has not received one, please let me know.

This month we have an interesting contribution from Mike(LA-008) who has researched a frequency usage chart showing which railroad radio channels are most used and by whom. The three types of frequencies listed are "P" for primary frequencies, "S" for secondary split frequencies, and "T" for tertiary split frequencies.

FREQ.	TYPE	TOTAL NUMBER OF LICENSES	FOUR MAIN USERS
161.100	S	1363	BN-679, SCL-550, GA-17, ICG-17
160.590	P	840	SCL-484, BN-141, MKT-50, DH-47
160.800	S	811	CR-607, AMTX-58, DMIR-36, SP-28
160.650	P	771	ATSF-359, BN-217, SOU-87, FEC-18
160.950	P	661	SOU-511, SP-74, GTW-13, CIM-9
161.190	P	595	ICG-300, NW-192, ATSF-18, CR-12
160.410	P	571	MP-390, CHES-65, UP-20, SP-17
161.370	P	570	LN-324, SOO-66, BN-50, ATSF-37
161.400	S	497	SP-188, CR-118, DH-47, BM-31
161.550	P	478	SP-364, BN-10, GTW-10, CHES-9
160.230	P	473	CHES-326, DMIR-35, UP-19, SLSF-11
161.250	P	470	BN-213, NW-78, KCS-67, CR-18
160.470	P	465	MP-356, BN-21, SP-15, LN-12
160.740	S	453	UP-316, KCS-65, CR-11, GTW-7
161.160	S	440	BN-188, CHES-117, SLSF-62, BM-24
160.890	P	395	CNW-220, SP-72, SCL-23, CHES-17
160.920	S	378	ICG-226, DRGW-76, SLSF-9, CR-6
161.130	P	373	SLSF-220, CR-69, SCL-18, BN-10
160.350	P	335	KCS-106, CR-48, SCL-42, DMIR-37

Railroads continued

160.785	T	334	CHES-292, GA-27, SLSF-5, ATSF-3
161.460	S	333	ICG-203, BN-51, CHES-22, SCL-20
160.290	P	332	SCL-123, UP-115, CHES-31
160.320	S	318	CHES-218, DMIR-35, RI-19, BN-9
161.280	S	315	ICG-171, CR-32, DMIR-21, WP-17
161.070	P	315	CR-208, PLE-18, SCL-14, UP-10
160.530	P	289	CHES-97, FEC-59, GTW-26, WP-26
161.520	S	283	CR-120, LN-48, SOO-42, BM-20
160.770	P	264	MILW-141, BN-12, MP-12, LN-11
160.260	S	262	KCS-108, CR-37, WP-29, ATSF-11
160.245	T	242	SOU-212, CR-11, CAGY-7, ICG-5
160.380	S	230	LI-49, WP-37, BN-35, LN-24
161.610	P	220	RI-199, BN-4, MILW-3, UP-3
161.310	P	188	GA-30, BLE-22, BN-19, CR-18
161.010	P	187	BN-128, ICG-23, ATSF-5, CHES-4
161.490	P	185	DRGW-52, SOU-33, RI-14, CR-13
160.830	P	178	SOU-27, BLE-22, LI-22, DRGW-20
160.440	S	163	NW-58, SCL-22, LN-18, BAR-16
160.980	S	154	CR-44, LN-18, DRGW-13, ICG-8
160.680	S	152	UP-52, LN-19, SP-18, CR-12

FREQ.	TYPE	TOTAL NUMBER OF LICENSES	FOUR MAIN USERS
161.430	P	141	SLSF-42, GA-30, DTI-17, SP-14
160.860	S	137	CR-41, ICG-35, CCO-15, SLSF-9
160.500	S	130	SLSF-17, CHES-16, SOU-13, URR-9
161.220	S	127	SCL-25, DTI-20, CR-18, BN-11
161.040	S	124	SCL-50, GTW-26, CNW-9, SLSF-7
160.620	S	124	WP-26, SLSF-12, URR-9, DMIR-8
161.340	S	105	DMIR-29, SCL-24, UP-11, CR-10
160.455	T	99	CNW-42, DRGW-33, LI-10, BN-3
160.710	P	92	BN-25, CR-13, SLSF-13, DRI-7
160.305	T	89	KCS-64, CR-8, LN-4, AMTK-2
160.935	T	86	CR-48, CHES-16, GTW-10, RI-4
160.560	S	80	CR-29, UP-11, ATSF-10, BN-6
161.565	T	79	SOU-28, NYTA-15, DRGW-8, CHES-7
161.025	T	78	UP-57, ICG-9, MCR-3, WMAT-2
161.385	T	74	GA-27, LI-8, SLSF-6, ATSF-5
161.415	T	72	GTW-33, SCL-9, SLSF-7, DRGW-6
161.205	T	71	GTW-33, CR-10, LN-3, MCR-3
160.215	T	70	SCL-17, CHES-14, BN-8, BLE-4
160.335	T	66	DRGW-18, ATSF-14, ICG-10, CR-6
452.900	P	66	DRGW-14, AMTX-11, BN-11, AMTK-5
161.265	T	62	LI-33, MGA-10, AMTK-8, DRGW-3
161.475	T	58	SOU-58, NEWF-12, WP-5, CHES-2
457.900	P	54	DRGW-14, BN-13, AMTK-6, APA-4
161.355	T	50	SCL-10, CHES-9, CSS-7, BN-4
160.875	T	48	BN-13, CHES-11, NEWF-11, MP-4
160.275	T	48	CR-14, ICG-14, CHES-5, ATSF-4
161.295	T	47	AMTX-19, ICG-7, ASAB-3, BRC-3
161.445	T	44	LI-24, CHES-5, MP-5, BRC-4
160.845	T	43	GTW-15, SP-6, NYTA-5, SLSF-5
161.325	T	42	CR-19, RFP-11, AMTK-4, SOU-3
161.535	T	41	CR-12, LI-7, SOU-4, ADN-3
160.395	T	41	SCL-14, DRGW-9, LI-4, CI-2
160.365	T	41	SOU-17, BN-8, CHES-5, CR-4
160.725	T	40	SLSF-16, DRGW-7, LI-7, CHES-3
161.505	T	37	BN-14, ICG-9, CR-4, CTOS-2
160.545	T	36	CR-9, SLSF-6, PPU-5, CHES-4
160.965	T	34	SLSF-16, CR-7, BRC-5, NW-2
160.905	T	33	SCL-14, NPB-5, MP-3, SLSF-3
160.515	T	33	MILW-5, SLSF-5, AMTX-4, TPW-4
160.485	T	33	BLE-5, DRGW-5, SLSF-5, CR-4

Railroads continued

160.695	T	31	SLSF-10, BRC-5, MCR-5, ITC-3
160.575	T	31	CHES-6, SOU-4, PBNE-3, SP-3
161.235	T	28	PPU-5, SP-5, WMAT-4, SLSF-3
160.425	T	27	RFP-10, CR-4, UP-2, ATSF-1
161.115	T	25	WP-10, NW-3, SLSF-3, ATSF-2
452.925	P	25	SP-12, UP-4, ATSF-3, CHES-2
160.635	T	24	AMTX-12, CHES-4, RI-2, SLSF-2
452.950	P	24	BN-10, LN-4, CHES-3, SOU-3
161.175	T	23	CNW-7, LN-5, NEWF-3, MP-2
160.665	T	23	IHB-4, MP-4, SLSF-4, BN-3
161.055	T	22	SCL-10, CR-6, BN-1, CW-1
161.145	T	21	SLSF-11, NW-4, ATSF-2, MP-2
160.995	T	20	CR-12, GEOR-4, SLSF-2, SCL-1

FREQ.	TYPE	TOTAL NUMBER OF LICENSES	FOUR MAIN USERS
160.755	T	19	SOU-5, CR-4, ATSF-2, GTW-2
160.605	T	16	ATSF-2, BN-2, CAGY-2, CHES-1
457.950	P	13	BN-8, CHES-3, ATSF-1, KCS-1
457.825	P	12	CNW-4, RI-3, UP-2, BN-1
161.085	T	11	ICG-6, KCPS-2, CR-1, SOO-1
452.825	P	11	CNW-4, UP-3, BN-1, KCS-1
160.815	T	10	CHES-4, MP-2, BS-1, CR-1
457.925	P	8	CHES-2, SP-2, ATSF-1, FEC-1
457.875	P	8	DRGW-2, ICG-2, TRRA-2, PATH-1
452.875	P	8	DRGW-2, ICG-2, UP-2, PATH-1

Please send those contributions in. This column can't be a success without you. More frequency lists from members next month. See you!

VHF Marine

Rod O'Connor, Editor

Send information, articles, frequencies and how they are used, and questions that relate to private, commercial, and Coast Guard VHF maritime and inland waterways radio communications to: Rod O'Connor, USCG Group, 259 High Street, South Portland, Maine 04106.

In the time since my last column, several letters from readers, and questions have arrived. Thank You to all who have contributed. If we continue getting information like this each month, the VHF Marine column will be around for quite a while.

KEVIN (KS 019) advises of frequencies in use by the Cedar Point Amusement Park in Sandusky, Ohio.

156.425 (VHF Channel 68) used by non-commercial vsls.
156.450 (VHF Channel 9) used by ferries between the park and downtown Sandusky.

Jeff (KY 023) has furnished call-signs and frequecnies used by Lifeline Search and Rescue in the Madison, IN area.
VHF Channel 9 (156.450 mhz) and Channel 68 (156.425 mhz.) used for commercial communications.
VHF Channel 17 (156.850 mhz.) used by police, fire, and state units along the Ohio River.

LIFELINE SEARCH AND RESCUE - Marine Licensed stations
WXF 2009 - Hand held portable set (Exec. Director's)
WXF 8531 - Ship portable
WXF 8532 - " "
WXH 8208 - Ship station "Star of Life"
WRD 677 - Limited coastal station on Ch. 16 and 68 Madison, Indiana

Jeff brings to my attention something which I have been meaning to mention for quite some time. One of the best booklets, in my opinion, for marine radio communications, frequency information and other uses is available from RADIO TECHNICAL COMMISSION FOR MARINE SERVICES, P.O.Box 19087, Washington, DC 20036. (This is not published by the government, but by a private outfit.) The cost is $3.00

MICHAEL (NY 067) wants to know what government agency has maps available of shipping lanes around New York Harbor. I suggest trying the many nautical supply stores around NYC which sell nautical and navigational charts and publications. The National Ocean Survey publishes "Coast Pilots", which contain valuable information for boaters and marine interests.
Mike is also tryig to find the frequencies used by the CG helicopters from Brooklyn Air Station in communicating with Mount Sinai Hospital in NYC. He mentions that the hospital communications officer declined to provide the freq. (My conclusion is that they obviously do not want the freq. to be publicized, possibly for safety reasons. I suggest trying a "search" mode. I will not become involved with a sensitive matter such as this.)
Mike would like to know if any members have heard any CG units on an "incorrect" (?) freq. (Actually, CG units do not have to be on a certain given freq. Often, especially during the summer season when there is a lot of boating activity, some CG units may be forced to use the freq. of a nearby CG unit. Since there are only a few freqs. designated for CG-only use, they can become crowded. We often share freqs. with other CG Groups or districts.

So much for the input from other members. Now, a few words of output from your editor.

1) Thanks to all who have started to contribute their information. Special thanks to those who have made this issue an especially interesting one.

2) A reminder to all who read this column, and contribute. If you do send in material, please allow some time before expecting to see it in this bulletin. The columns are made up 2½ months in advance of the cover date. (Today is the 26th of March!!)

3) I often get much more info than I can print! Please try to send in unusual or interesting marine information. I can only print so many charts of the VHF Marine band before boring everybody else to death.

4) Replies to letters - I enjoy hearing from all of you. If you'd like a response, please enclose return postage. Also, NO cassettes, please. If any members would like

their letters forwarded or relayed to others, please go through HQ. I prefer not to "relay"messages through this column.

5) **Sensitive frequencies** - Many Coast Guard frequencies are considered sensitive, and if no mention is made of them, there is a valid reason. I need to be quite discreet in what I do/don't publish.

So much for this issue. I'll be back next month.

under 30 MHz

Chris Devendorf, Editor

Shortwave Utility

This column is for reporting RTTY, CW, MCW, SSB, AM and FAX reception reports, explanatory notes, articles, and questions related to frequencies below 30 MHz. Services covered in this column will be military, civilian aeronautical, coastal/maritime, SSB broadcast feeders, government, beacons, weather, voice markers, time/frequency stations, etc.——essentially everything except broadcast, CB, and amateur radio. Send to: Chris Devendorf, P.O. Box 6002, Laguna Niguel, CA 92677. If you need a Shortwave Utility report form, please inclose a SASE with your request.

ATTENTION ALL READERS: Please note the new address for the Utility Column.

INFO

From Craig Thompson, CA-VE-11: (This info was accidently deleted by the paste-up crew in the FEB column).

YAKOTA, Japan

SSB	18002	0000-0900Z	Coded broadcasts at H+46
	13201	2100-1000Z	
	11236	24 hours	"CAPSULE" broadcasts at H+05 & 35.
	8967	24 hours	
	6738	0900-2400Z	
	4747	1000-2100Z	
AM	13215		
	5710		

VNG - VICTORIA, Australia (Time & Freq Station)

12000 7500 4500	This station is received here on the West Coast on 12 Mhz and 7.5 Mhz about 0900Z. 4.5 Mhz comes in about 1100Z. It and 7.5 Mhz fade away about one hour before sunrise.

From Patrick Stewart, CA-AL-23:

MC CLELLAN AIRWAYS (USB)		HICKAM AIRWAYS (USB)
8989, 11239	24 hours	11179
4746, 6738	0400-1600Z	13201
15031, 18002	1600-0400Z	

ANCHORAGE RADIO (USB/AM)

5589
8938

TAHITI CENTER (USB/AM)

5638
8847
13304

SAN FRANCISCO ARINC (Aeronautical Radio Inc)

Group 1 3467 5603 8875 13336 17909 (AM/USB)

Group 2 3001 5554 8931 13312 (AM/USB)

From GUY (CAN-031) All frequencies are in KHZ

(AIRPORTS)

Alert, NWT (Cdn Forces Station)
A/G: 5680 6705 11233

Baker Lake, NWT (Transport Cda)
FSS: 403 5680

Cambridge Bay, NWT (Transport Cda)
FSS: 245 3023.5 5680
Intl Air Carrier: 5624 8910 11303 2868

Cape Dyer, NWT (USAF Dew Line Base)
FSS: 3023.5

Cape Parry, NWT (USAF Dew Line Base)
FSS: 3023.5

Chesterfield Inlet, NWT (Civilian)
FSS: 5680

Clinton Point, NWT (USAF Dew Line Base)
FSS: 209

Contwoyto Lake, NWT (Civilian)
A/G: 5619 5649 5680

Coppermine, NWT (Civilian)
FSS: 372 5680

Coral Harbour, NWT (Transport Cda)
FSS: 362 5680

Dawson, YT (Civilian)
FSS: 214 5680

Fort Simpson, NWT (Transport Cda)
FSS: 375 5680

Fort Smith, NWT (Transport Cda)
FSS: 254 5680

Frobisher, NWT (Transport Cda)
FSS: 206 5680
Intl Air Carrier: 2868 5624 8910 11303

Hall Beach, NWT (Transport Cda)
FSS: 3023.5

Hay River, NWT (Transport Cda)
FSS: 311 5680

Inuvik, NWT (Transport Cda)
FSS: 254 5680

Ivujivik, Que (Civilian)
FSS: 4675

Kokakuk Beach, YT (USAF Dew Line Base)
FSS: 239

Mayo, YT (Civilian)
FSS: 365 5680

Norman Wells, NWT (Transport Cda)
FSS: 326 5680

Povungnituk, Que (Civilian)
FSS: 4675

Rea Point, NWT (Civilian)
A/G: 3310 52815 5411

Resolute, NWT (Transport Cda)
FSS: 350 5680

Sachs Harbour, NWT Civilian)
FSS: 321 5680

Teslin, YT (Civilian)
FSS: 269

Tuktoyaktuk, NWT (Transport Cda)
FSS: 5680

Watson Lake, YT Transport Cda)
FSS: 248 5680

Whale Cove, NWT (Civilian)
A/G: 47715

Whitehorse, YT (Transport Cda)
FSS: 302 5680

Yellowknife, NWT (Transport Cda)
FSS: 356 5680

(NWT) SHIPS
MacKenzie Delta: System Emergency & Calling Frequency: 5803 Khz
Canadian Submarines Distress Indicator Buoys: automatic TX radio on 4340.0 Khz.

INTERCEPTS

Contributor		Primary Receiver	RTTY Unit
Mike Chabak	AZ-23	HQ-180	
Chris Devendorf	CA-OR-50	DR-33	M-200E
Fred Osterman	KY-18	R-4B	M-200E
Bob Rankin	KS-1	R-7	
Al Ricciuto	NY-150	DR-22	
Leonard Stock	CO-25	FRG-7000	

Voice

2558	AM	3-2	0127	Nassau, Bahamas, YL wkg WYU4253	FO
	AM	3-2	0300	Nassau, Bahamas, w/ weather broadcast	FO
4360	USB	3-26	1640	SAN DIEGO ICSB-1 wkg USNS TALUGA	CD
4509	USB	3-20	0056	JAYHAWK 1 wkg JAYHAWK 4 (Kansas CAP)	BR
4565	USB	3-8	1432	GUITAR MANAGER 6 wkg GUITAR MANAGER 66 (Wyoming??)	LS
4760	LSB	3-25	1316	SWEAT 32 wkg SWEAT 31 (SAMTO aircraft)	MC
5080	USB	3-24	1307	PLEAD CONTROL (NAS Pt Mugu) wkg PAPA ECHO	MC
5233	USB	2-24	0211	24 wkg 14 with radio check	LS
5400	USB	3-6	1350	WUD7 USACE Rock Island, IL wkg WUD741J w/ tfc	LS
5688	USB	3-1	1502	AXF AIR FORCE SYDNEY, Aust. wkg TRITON 77 w/ wx rpt	LS
5822	USB	3-25	1409	SWEAT 32 wkg ABNORMAL 1Ø (SAMTO Vandenberg)	MC
6540	A3H	2-7	0101	NEW YORK (ARINC) wkg AIR WORLD 1Ø3	AR
6616.8	A3H	3-2	0237	BRAZZAVILLE VOLMET w/ wx in FF	BR
6715	USB	3-25	0118	KING 93 wkg KING 17 (USAF Rescue aircraft)	MC
6833	AM	3-15	0527	SPY STATION: YL SS 5-digit, Final at 0538	BR
6932	USB	2-24	0155	DEPEND Ø1 wkg DEPEND 6Ø with traffic	LS
7520	USB	3-26	1624	ZERO TWO wkg FIVE SEVEN, mentioned helos	CD
7527	AM	2-26	0610	SPY STATION: YL SS 5-digit Attencion 580 75, Final at 0619 & off at 0620	BR
	USB	3-16	0000	RAMPART wkg HOMEPLATE and SLINGSHOT	BR
	USB	3-16	0000	OMAHA 44 wkg SLINGSHOT and RAMPART	BR
	USB	3-16	0100	AGA3HQ Scott AFB, IL wkg OMAHA 53	BR
7706.5	LSB	3-25	1340	AGAR 1Ø wkg SWEAT 32 (SAMTO Aircarft)	MC
	LSB	3-25	1355	ABNORMAL 1Ø (Vandenberg AFB) wkg SWEAT 32	MC
	LSB	3-25	1401	ARIA COURT (Wright Patterson AFB) wkg SWEAT 31 & 32	MC
8291	USB	2-19	1440	KZA95Ø Brooklyn, NY wkg vessel MORMACMOON	AR
8294	SSB	3-8	2340	SHACKLETON BASE, Antarctica wkg SOUTH GEORGIA ISLAND	FO
8610	USB	3-17	2315	CONDOR wkg BARBARIAN 1Ø (QRM from WMH)	BR
8772	USB	3-31	0724	IMITATION 2 wkg SPARTAN WEATHER (USN)	CD
8811	USB	3-17	2058	REPUBLIC 333 wkg REPUBLIC 198 with radio check	LS
8826	SSB	2-9	0250	NIAMEY, Niger wkg NIGERIA 8Ø1 (OM in EE)	FO
	A3H	2-26	0433	ALGERIA wkg AIR ALGERIA 5223	AR
	A3H	2-26	0549	NIAMEY wkg DP526	AR
	A3H	3-1	2342	BRAZZAVILLE wkg ZAMBIA 0924	AR
	A3H	3-14	0007	ALGIERS wkg BULGARIAN 1Ø5	AR
	A3H	3-14	0050	KHARTOUM wkg BALAIR 62Ø	AR
8847	A3H	3-8	0443	HONOLULU (ARINC) wkg CONTINENTAL 6Ø7	AR
8917	SSB	3-20	2034	LOCKHEED LA wkg 5ØØ1 with radio check	LS
8924	A3H	3-13	0645	ALGIERS wkg GHANA 7Ø6	AR
8945	A3H	3-14	0058	NEW YORK (ARINC) wkg CRAZEIRO 111	AR
	A3H	3-14	0200	NEW YORK (ARINC) wkg OLYMPIC 412	AR
8959	A3H	2-21	0631	TRIPOLI wkg 5DAS	AR
9040.1	USB	3-13	0445	SPY STATION: YL GG 5-digit "Ende" with tone then off	BR
10049	A3H	2-11	0440	RECIFE, Brazil wkg IBERIA 995	AR
	A3H	3-9	0459	CAMPO GRADE, Brazil wkg LUFTHANSA 461	AR
	A3H	3-13	0605	RECIFE, Brazil wkg AIR PARAGUAY 8ØØ	AR
10273.5	USB	3-25	1411	SWEAT 31 wkg ABNORMAL 1Ø (SAMTO Vandenberg)	MC
10493	USB	3-26	1629	KNC76 FEMA South Dakota wkg WGY9Ø6 (QTH?)	CD
10804	LSB	3-25	1415	SWEAT 31 wkg ABNORMAL 1Ø (SAMTO Vandenberg)	MC
	LSB	3-25	1518	ARIA COURT (Wright-Patterson AFB) wkg SWEAT 31	MC
10935	LSB	3-18	1332	HIP491 USMAG Dominican Rep. wkg AHF4 Albrook AFB	MC
11076	USB	3-19	1824	ATLAS wkg FLINT 354 with p/p	LS
	USB	3-23	0524	AMATEQUILA clg ATLAS	BR
11121.3	LSB	3-25	0715	TELECOM SENEGAL w/ voice mirror	BR
11247	USB	3-1	1500	AXF AIR FORCE SYDNEY wkg AUSSIE Ø3w/position rpt	LS
11367	A3H	2-21	1725	NEW YORK (ARINC) wkg 9Ø1BM	AR
11440	USB	3-19	1700	TURKEY, KING 7Ø and JOLLY 24 (poss in Calif.)	BR
11441	USB	3-19	1705	Unk station testing "NORAD Backup radio net"	BR
13201	SSB	3-8	0236	ELMENDORF, AK wkg Y9I61	FO
13304	SSB	3-2	0424	AUCKLAND, New Zealand wkg unk aircraft	FO

	SSB	3-8		NANDI, Fiji wkg MAC 5Ø243	FO
13328	A3H	2-12	1827	GANDER, Nfld wkg NORTHWEST 922	AR
13950	LSB	3-16	1248	AHF1A USMAG El Salvador wkg YWA6 USMAG Caracas, p/p	MC
	LSB	3-16	1354	YWA6 USMAG Caracas, Venezuela wkg AHF4 Albrook AFB	MC
	LSB	3-18	2344	YS1UKE USMAG El Salvador wkg AHF4 Albrook AFB	MC
14776	SSB	3-23	1524	GOLDFISH MAINTENANCE wkg WGY9Ø7 w/ RTTY check	LS
14908	USB	3-16	1451	GOLDFISH MAINTENANCE wkg WGY9O7 w/ RTTY check	LS
15048	SSB	3-6	1521	ANDREWS, MD wkg COWPUNCHER w/ p/p to CROWN	LS
15747	LSB	3-17	2001	GOLF 1Ø wkg GOLF Ø3	LS
15755	SSB	3-19	2058	VEX Penhold, Alberta wkg CIP22 with p/p	LS
17555	USB	3-22	0545	CHU Ottawa, Canada with time signals (New freq? Bob sez it was heard only that day!)	BR
17965	USB	3-13	2155	ROCKWELL FLIGHT TEST wkg 41D with radio check	LS
	SSB	3-23	2108	KBU5 (QTH??) wkg 73CR with radio check	LS
18027	LSB	3-30	2159	AIR FORCE 2 wkg ANDREWS & CROWN (returning from Texas after President was shot)	CD
18666	USB	2-26	2215	TROPIC AIR wkg ATLAS	BR
	USB	3-3	1935	FLINT 351 wkg ATLAS enroute FLINT BASE	BR
	USB	3-19	1800	ATLAS wkg FLINTs 352, 356 and 357	BR
19000	USB	3-12	2012	222 wkg 235 with radio check	LS
20027	USB	3-13	0155	WGY9Ø9 wkg HIGH COMMAND with telecom	LS
20186	SSB	2-26	0205	TWELVE wkg NINE ONE (ETR Ascension and Antigua)	LS
	USB	3-20	2157	NINE ONE (Antigua) clg ONE (Patrick AFB)	LS
20191	LSB	3-18	1526	NINE ONE (Antigua) wkg ONE (Patrick AFB)	LS
23120	USB	3-15	1742	SPY STATION: YL GG 5-digit, Ende & tone then off	BR
23615	USB	3-21	1940	LOME, Togo, PTP station, FF vm	BR

Morse

198	MCW	12-18	0412	"HAH" beacon: New Rivers, North Carolina	AR
205	MCW	12-18	0407	"RQ" beacon: Trois Rivieres, Quebec	AR
254	MCW	2-21	0302	"RUS" beacon: Rapid City, Kansas	LS
263	MCW	12-16	0458	"LQL" beacon: Willoughby, Ohio	AR
272	MCW	3-1	0305	"AIZ" beacon: Kaiser, Misouri	LS
330	MCW	2-21	0222	"GLE" beacon: Gainsville, Texas	LS
356	MCW	12-19	0720	"KT" beacon: Marks, Ontario	AR
402	MCW	12-19	0547	"IFJ" beacon: Winfield, Louisiana	AR
408	MCW	12-16	0730	"OIK" beacon: Ocean City, Maryland	AR
6690	CW	3-11	0948	"MPP DE FOW" (Unk QTH) w/ traffic list	CD
7528	CW	3-22	0145	"OM" sending long string of Cyrillic letters	BR
7532	CW	3-9	0700	FSB INTERPOL Paris w/ CQ mkr and traffic	BR
9043.5	CW	3-11	0933	"K" beacon with telemetry until 0935	CD
12660	CW	3-9	0510	YIR Basrah, Iraq, V marker	FO
10753	CW	3-9	0506	HIS Santo Domingo, Dominica, V marker	FO
13216a	CW	3-8	2229	FUX French Navy St Denis, Reunion, V marker	FO
14477.5	CW	3-26	0557	"K" beacon	CD
22242	CW	3-5	1928	KPH San Francisco, CA wkg 8KXF	AR

RTTY

10830	66/425	3-9	0330	RUZU Molodesynaya, Antarctica with coded wx	FO
14434a	66/850	2-8	0636	Martin De Vivies, St Paul & Amsterdam Is w/ wx transmission to HXP St Denis	FO
16223	66/850	2-27	1358	3MA35 CNA Taipei, Taiwan, EE news	FO

photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two-way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two-way related equipment of interest, Photographs must be 3' by 5' inches or larger, black and white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE. Send photos or write to: Mike Redmann, P.O. Box 1177, St. Charles, MO 63301.

ED (IL-004) snapped these photos of an FAA site near Aurora Illinois. Actual location is Downer's Grove. Anyone out there have any ideas as to what all of this stuff does? Looks like a dandy spot to place a receiver. On the other hand, if it weren't for the wide angle shot of the whole affair, it would resemble the antenna arrays on some of our homes. Either Ed has a telephoto lens or the courage to climb the towers for those close-in shots. Well, if you folks out there can expound on this unique installation (or tell us what it does) feel free to write and we'll let the whole club in on it. (Maybe this <u>is</u> Ed's back yard installation)? C'mon, help me out!

Now it's time for you to dig out that camera that you only use on Christmas, your kids' birthdays, and vacations. Put in a roll of black and white film, then have the results made into the preferred five by seven size and mail them in! What better time to photograph your station, your roof antenna array, local PD tower, local FD console, Police car radio console, mobile scanner installation, how-to story of a unique built-in or cabinet you may have built, antique scanners, or any unusual photograph you can think of where some aspect of the hobby is displayed in a unique or unusual style. I'll be watching the mail for them!!

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

NEWS HIGHLIGHTS

ANARC is a federation of the most responsible, well established radio listening clubs in North America. RCMA attained Full Member status in ANARC in 1977. For a list of the ANARC Member and Associate Member clubs, send a self-addressed, stamped business size envelope with your request to the address below. For an annual subscription to the monthly 'ANARC Newsletter,' send $3.50 to: ANARC, 557 N. Madison Ave., Pasadena, CA 91101.

The 1981 edition of the ANARC Convention will be held in Thunder Bay, Ontario , Canada, and will be sponsored by Canadian S–W–L International. Convention hosts will be Bill Butuk, John Garner, and Neville Denetto of C–SWL–I. As the United Nations has declared 1981 as the International Year of the Disabled, HAP activities will be emphasized. Also, this year's convention is being billed as a family convention, with tours, sight-seeing, and shopping trips for those who are accompanying radio conventioneers.

Dates: July 17, 18, and 19, 1981

Place: All convention sessions will be held at the Airlane Motor Hotel in Thunder Bay

Tentative Convention Program

Thursday, July 16: For early arrivals, there will be an Icebreaker on Thursday evening with a cash bar. This will be a good chance to get acquainted with fellow SWLs/DXers.

Friday, July 17: Registration, introduction by Convention Chairman Bill Butuk, opening remarks by ANARC Executive Secretary Dave Browne, ANARC Reps meeting, talks and lectures, communications displays, equipment displays, amateur radio station, symposium, and banquet.

Saturday, July 18: Talks and lectures, International Broadcasters Forum, HAP Auction (this being the International Year of the Disabled, the HAP Auction is being given top billing in the Saturday evening time slot, and the annual banquet is being shifted to Friday evening). Also, club exhibits, amateur radio station, equipment displays throughout the day.

Sunday, July 19: Conventioneers buffet breakfast (price included in registration fee), ANARC business meeting, and convention windup.

Monday, July 20: If there is a sufficient number of people interested, a two-hour boat tour of the wonderful Thunder Bay Harbouriis planned. This would be an opportunity for those who didn't get in on the sight-seeing activities of Friday, Saturday, or Sunday–however, repeat tours would be welcome.

ACCOMODATIONS: A block booking has been made at the Airlane Motor Hotel on the Airport Strip (West Arthur Street) in Thunder Bay. An indoor swimming pool, sauna, excellent food in the Dining Room and Coffee Shop and spacious lounge are features at the Airlane.

HOTEL RATES: Single – $32.50 Canadian or $27.50 U.S.
Double – $38.50 Canadian or $32.75 U.S.
Each additional person in room – $2.00

A number of VIP suites are available – contact convention HQ for details.

PLEASE NOTE: In order to have an assured hotel reservation, your reservation form must be received at Convention Headquarters no later than June 15, 1981. After that date, the Convention Committee cannot guarantee hotel accomodations.

Convention Registration Fee: $15.00 Canadian or $12.75 U.S. This fee includes the Sunday morning buffet breakf

Friday evening banquet: $15.00 Canadian or $12.75 U.S.

APPLICATIONS AND RESERVATIONS FORMS:

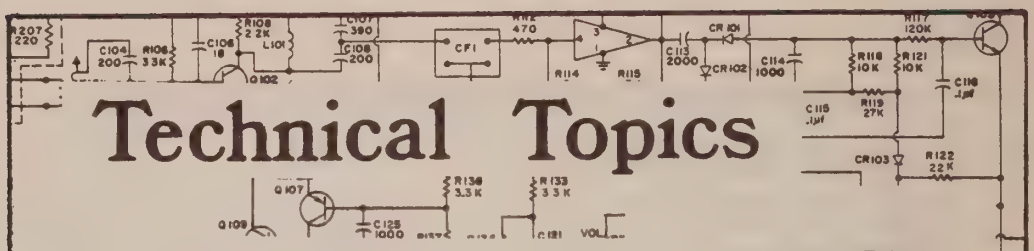
YOU WILL FIND AN APPLICATION AND RESERVATIONS FORM ON THE NEXT PAGE! JUST DETACH IT F FROM THE NEWSLETTER AND SEND TO:

ANARC '81
P.O. Box 142
Thunder Bay, Ontario
P7C 4V5, Canada

Further information and additional application and reservations forms are available from the Convention Headquarte (same address as above). Please include a self-addressed, stamped envelope (Canadianoor U.S. postage is acceptable, since we will be mailing U.S. mail from our Minnesota Post Office Box).

THUNDER BAY IS WAITING TO WELCOME YOU ! ! !

COME AND BRING THE WHOLE FAMILY FOR A FINE VACATION!



Technical Topics

Chuck Smith, Editor

Send all equipment reviews, technical articles, technical tips, and questions on such subjects as receivers, antennas, preamps, accessory equipment, repeaters, links, tones, scramblers, non-voice data transmissions, or even computer applications for monitoring to: Chuck Smith, 4901 Heil Avenue, No. 3C, Huntington Beach, CA 92649.

Greetings, one and all, and welcome to the June, 1981 issue of the RCMA Newsletter. I hope the milder summer weather finds all of you in good health, good spirits, and with the necessary enthusiasm to get out there and finish all of those antenna projects that the inclement winter weather has been keeping you away from.

I find myself in a very gratifying situation this issue: questions and contributions from you members have been at a high enough level so that I'll be able to spare you my usual editorial spiel, ha ha. Instead I will be able to make up the bulk of this month's column by doing the thing I should be doing in the first place, and that's answering your questions and editing your contributions.

USING COMBINERS--IS IT KOSHER?

JEFFERY (GA-027) wrote me a letter which asked whether or not it would work to use an antenna "combiner" to connect both an omnidirectional ground plane and a rotatable beam antenna to the same radio at the same time, thus being able to listen to a weak station using the ground plane while simultaneously swinging the beam antenna for better reception.

In theory at least, this is a reasonable proposal. However, let me qualify a few things. First of all, there are combiners and there are combiners. No, this isn't really double-talk; what I'm trying to say here is that on the market there are both good, effective combiners and also ones that are nothing but junk. The purpose of a combiner is to couple the RF signals fed to two or more input ports to a common output port, and at the same time minimize or eliminate any interaction between the signals which are connected to the input ports. There is a price for all of this, however. First of all, there will be a signal loss through the combiner compared to simply connecting the antenna directly to the receiver. This loss amounts to about 3 db for each of the antennas which are connected to the combiner, and although this may seem like a small amount of loss, it is equivalent to losing one-half of the received signal, and in cases where reception was already marginal could make the difference between hearing the station and not hearing it. In addition, the isolation between the input ports may be less than ideal, depending upon the quality of the combiner in question, and this interaction will result in additional losses and impedance mismatches. I would recommend in particular that you beware of the commonly available and inexpensive combiners which are sold primarily for use in connecting TV sets together. These types of combiners are made with little or no regard for minimum losses, since TV signals are almost always hundreds or thousands of times stronger than some of the signals which we are interested in as monitor listeners, and many times they are nothing more than impedance matching "pads" constructed from a few cheap carbon composition resistors, and do little or nothing at all in the way of isolating one input port from another. Stay away from these pieces of junk, because the level of performance you will end up with will be far below the capability of each individual antenna on its own.

There are high-quality signal combiners and splitters available from several companies which specialize in such things, but usually (not always) they are designed for use in 52-ohm systems and use unusual connectors such

CANADIAN
S-W-L
INTERNATIONAL

ANARC 1981 CONVENTION
THUNDER BAY ONTARIO
JULY 17, 18, & 19

RESERVATION FORM

NAME (Please print) _____

ADDRESS _____ CITY _____

STATE OR PROV. _____ POSTAL OR ZIP CODE _____

I would like to reserve a room at the Airlane Motor Hotel:

___Single (CDN $32.50 or US $27.50 ___Double (CDN $38.50 or US $32.75

___Extra person(s) in room ($2.00/night)

If sharing a room, expected room-mate _____

First night deposit required for hotel.....$_____

Convention Registration Fee (CDN $15.00 or US $12.75).....$_____

Banquet Fee (CDN $15.00 or US $12.75).....$_____

TOTAL AMOUNT ENCLOSED.....$_____

Please remit by cheque or money order. US checks are acceptable. Make cheques payable to ANARC '81. Do not send cash in the mail. Hotel reservations and convention registration will be confirmed when fees are received. Please allow 2-3 weeks for confirmation.

Reservation forms should be received no later than June 15. After that date, hotel accomodations cannot be guaranteed.

Date of arrival in Thunder Bay _____ Date of Departure _____

Mode of transportation: Car ____ Plane ___: Flight No. _____

Train ___ Bus ___ Other _____

Do you require any special accomodations? _____ (If so, please indicate)

_____

_____

Please circle the ANARC Clubs, if any, of which you are a member:

ASWIC AIDX ASDA CIDX CSWLI COCQ IRCA LWCA MVDXC NRC

NNRC NASWA ODXA RCMA SPEEDX WTFDA CDXQ MDXC SDDXC

SDXA UMDXC WADXA WSWLC HAP CHAP

(Note: Membership is not necessary to attend the convention)

****

PLEASE RETURN THIS FORM AS SOON AS POSSIBLE TO:

ANARC '81
P.O. Box 142
Thunder Bay, Ontario
P7C 4V5 Canada

Looking forward to seeing you in Thunder Bay in July at ANARC '81 !

as the miniature SMA type. The cheap TV combiners are made for 75-ohm systems, or the common 300-ohm twin lead type, and have no business in a monitoring set-up. However, a properly designed combiner, connected as it was intended to be, can prove to be a valuable asset to your monitoring post by letting you connect more than one antenna to your receiver with a minimum of degrading effects.

WHAT HAPPENED TO THE TOWER?

I recently received a letter from DONALD (CA-RI-031) who expressed dismay at not being able to hear tower transmissions on either one of his Bearcat 220's, even though he was sure he had programmed in the correct frequencies and was using external antennas some thirty feet in the air.

Well Donald, you didn't say which airport you were trying to hear (Don lives in Banning, CA about 25 miles west of Palm Springs) but I'll proceed anyway with what I think is a reasonable explanation. Since most transmissions from an airport tower are either with an aircraft on the ground located immediately at the airport or with airborne aircraft, the height of the transmitting antenna at the tower is likely to be rather low; on the order of 50 feet or less. This is more than adequate for reliable communications with aircraft on the ground and airborne aircraft within the tower's sphere of responsibility. However, depending upon your distance from the airport in question and the height of your antenna, that just may not be enough.

At VHF frequencies such as those used by the aircraft and the tower, signals tend to travel a path which roughly conforms to the line-of-sight rule. That is, the antennas must be able to "see" one another in order to effect communications. This is not a hard and fast rule, however, and in the 108-136 MHz range, the radio horizon is often far beyond the actual optical horizon. There is a formula for computing the maximum communications distance between two stations when the heights of the antennas at both ends of the path are known, and applying this to your example and assuming that the height of the airport tower antenna is on the order of 50 feet, I would guess that you could expect a reception range of about 35-45 miles. This would seem to be adequate to receive the airport at Palm Springs and possibly the one in Riverside, but ground-to-ground reception into Los Angeles or Orange County would seem to me to be quite remote. If you are not hearing the airport at Palm Springs there is always the possibility that I have severely overestimated the height of their antenna system. An airport which is charged with strictly local responsibility would not need to mount their antenna as high as a larger one with a greater area of influence. You are hearing the aircraft, of course, because once airborne, their antennas are at the same altitude as they are, and as a result their transmissions can often be heard for hundreds of miles until they enter a landing pattern and begin to reduce their altitude. I hope this brief explanation was of help to you, DON.

SCANNER FILTER "REVIEW"

I had to do a lot of thinking about just exactly how to tackle this next problem. Then I decided to just relate the facts as they were related to me, and expound on them with a minimum of personal comments. I think you'll see what I mean more clearly as I proceed.

I received a letter from CHARLES (IL-141), which I shall first relay to you exactly as it was written:

"Greetings from Southern Illinois! I always enjoy reading your tech topics columns.

Mainly this letter concerns my newly bought Grove Enterprises "Scanner Filter". First, the filter greatly attenuates the overall frequency spectrum (30-512), irregardless of dial setting. I suspect this may be caused by the high-pass series network; low band is most affected with perhaps 30% signal attenuation!

Secondly, upon opening the "large" 4½x3½x2" metal box, only a smattering of electronics was present. At $40 this filter has the makings of a rip-off.

The notch filter, however, works well! I get airplane images on 154.95 and the filter really "notched" the stuffings out of 'em. I'm going to buy a 2-24 pf air capacitor and .22 microhenry coil and make my own filters. More than one notch filter could be employed.

I'm going to send Mr. Grove's filter back to him. But I complain more than most people, so I'm sure there will be some individuals who won't notice anything "wrong" with this filter. If, for instance, you lived in a large city and were interested only in local transmissions, you might not notice a 20-30% decrease in "top-end" performance. But I live out in the sticks and must strain to hear the cities. (You might say I have to pump in my electromagnetic radiation!) Adding this Grove Enterprises filter defeats the good antenna system!"

I printed this letter for a couple of reasons, none of which was to pick on this particular device. I examined the schematic of this unit and found it to be exactly what it claimed to be: a parallel-resonant series filter connected to a series-resonant shunt filter. This device is capable of doing what it is advertised to do, but nothing more. The input section of the filter consists of a 8.2 microhenry inductor connected in parallel with a 33 pf fixed capacitor, and this combination would then be parallel resonant at a frequency of 9.675 MHz. Since a filter in this configuration presents maximum impedance at resonance, and it is connected in series with the input signal, this filter will block signals at or around 9.675 MHz. This is meant to reduce or eliminate IF breakthrough, a phenomenon in which a frequency at the IF (10.7 MHz or thereabouts) is allowed to sneak past the front end of the receiver and be detected. This filter will, however, cause some attenuation at frequencies other than its actual resonant frequency. The quality, or "Q", of a tuned circuit, is a way to determine how sharp the filter is, and can be determined by dividing the reactance of the inductor at resonance by the DC resistance of the inductor. The inductive reactance of the 8.2 microhenry choke at resonance (9.675 MHz) is going to be 498 ohms, and if we for the sake of argument assume that the DC resistance of the inductor is 25 ohms, then the "Q" of the tuned circuit will be about 20. This is a reasonable value for this tuned circuit, and should result in little or no effect at frequencies of concern to we monitor listeners. However, this "Q" is known as the unloaded "Q", and this will be affected by the series resonant filter which follows as well as the input impedance of the receiver connected to it. Therefore, some affect on the lower end of the low VHF band can probably be expected, and would have to be lived with if the filter is used.

The notch filter consists of a .22 microhenry inductor in series with a 2-25 pf air "trimmer" capacitor. Using these component values, the notch should be variable from a low frequency of 67.86 MHz to a high frequency of 240 MHz. Since the impedance of a series-resonant circuit is lowest when it is at resonance, and since the filter is connected in parallel with the signal path, this will act as a "suck-out" filter, and can be used as described to eliminate or reduce the effects of images and or intermodulation. However, it is subject to the same type of discussion about "Q" as was the first filter section, and since this filter will not have infinitely steep sides, one can expect some adverse effects when using it. This does not mean that the filter is worthless or otherwise ineffective.

What I am trying to say is that to one person (CHARLES, in this case) the device does not live up to expectations, and as such he has every right to express his opinion, as I proved by printing his letter. And perhaps $40 is a little steep for a metal case, two connectors, two capacitors, two inductors, a knob, and some feet. But that is for each buyer to decide on his own, and I encourage everyone who is thinking of trying devices such as this, whether they be antennas, preamps, filters, or whatever, to keep in mind that nothing works perfectly all the time in all cases, and that if they do have questions about the viability of something, not to be afraid

to ask questions, whether they be to me or the manufacturer of the product. The device in question is indeed a filter, and can be used as described, but to make a filter which would work only on gremlins and images and leave all else completely untouched would certainly set you back a hell of a lot more than $40. Thanks for your letter, CHARLES; you made a very good point and I enjoyed the opportunity to address the issue.

M-100 MODIFICATIONS

Here are some interesting and worthwhile modifications that you might consider making if you are the owner of a Regency M-100, sent courtesy of STAN (OR-19).

"I have changed a few things on my Regeney M-100 and I thought some other members might appreciate the modifications. As a lot of us know, the M-100 can be made to accept out-of-band frequencies by entering a decimal point before entering the frequency. This limiting of frequencies can be permanently eliminated by installing a jumper from pin 34 to ground of IC-109, the 40-pin microprocessor chip on the main board. Regency has pre-drilled the two holes.

One operational aspect of the scanner I did not like was that the audio was muted during the entry of a new frequency. This muting can be eliminated by disconnecting pin 33 of IC-109 from the squelch circuit. This is most easily accomplished by locating CR-109 and clipping or unsoldering either lead. This is a glass body diode located 1" towards the center of the board from IC-109. The normal squelching action of the radio will remain unaffected.

IC-105 is the chip that generates the "beeps" when you hit a key. It is a 16-pin chip located all the way towards the front of the main board. Adding a resistor (100K-1M) from pin 12 to ground will speed up the duration of the beep. Between pins 9 and 10 is a resistor (39K) and a capacitor (.0047 uF). Adding another capacitor in parallel will lower the frequency of the beep.

If you own another scanner and its IF interferes with the M-100, you can change the M-100 to a 10.8 MHz IF. The procedure is too lengthy to describe here. Anyone interested should buy the M-100 service manual from Regency and order the new filter and crystal filter."

These modifications to the popular M-100 should prove to be very valuable to owners of these radios, and I want to thank STAN for his input. I also want to apologize for taking so long to get this information into print; as disorganized as I am at times, I amaze myself that anything gets done at all sometimes.

DIGITAL VOICE PROTECTION

A letter from ANDY (KS-014) asks about digital voice scrambling--how is it done, can it be decoded, etc. While precise information about this new mode of voice protection is rather scarce, I'll do what I can to explain the general aspects of DVP.

The first and most important step in the Digital Voice Protection process is the conversion of the human voice signal, primarily an analog signal, into a digital one. This is usually done by means of a specially designed analog-to-digital converter (ADC) known as a CODEC. This circuit is designed to sample the voice signal at a high rate of speed, hold the analog value, and convert it into a digital representation of the applied signal. The end result of this conversion is that the voice signal is totally transformed from an analog signal (one which is represented by an infinite number of scalar values) to a digital signal (one which is represented by a string of binary numbers consisting of ones and zeros, ons and offs, or what have you). Once the voice signal has been converted, the normal order of the digital bits which represent the analog signal (that being from the least significant bit to the most significant bit) are transformed around so that a normal digital-to-analog converter (DAC) would not be able to restore the digital signal to its original analog form. It is much easier, it

should be noted, to manipulate a digital signal, with its two separate discrete values, than it is to mess around with an analog signal and its infinite variation of signal values. Once the signal has been converted from analog to digital form and then encrypted, it is used to modulate an AFSK (audio frequency shift keying) device which is then used to modulate the FM carrier wave.

Since the signal being transmitted over the air is actually an FSK modulated digital version of the actual human voice signal, it bears no resemblance to the voice itself, and depending on the FSK frequenies being used and the sampling rate used for the CODEC, makes the new encoded signal sound like static or the rushing noise of an open squelch. It can be decoded only by a mirror-image device at the receiving end which uses all of the same parameters for the decoding process as were used for the encoding process. This makes it practically impossible for anyone but the intended listener to decode, since there is no way to know precisely what those parameters are. It is relatively safe to say that for the unsophisticated monitor listener, there is absolutely no chance to decode a signal which has been generated via digital voice protection. Other types of descramblers, such as the audio inversion types, are totally ineffective against this type of encryption, and it is my personal opinion that if this type of device were widely implemented by law enforcement agencies, it would most certainly signal the end of monitoring as we know it. Let's face it, kiddies, there is no way that we are going to beat this game, and the only way that we can effectively wage war against this problem is to show that the majority of scanner users are responsible hobbyists with no ulterior motives, and that the high expense of implementing digital voice protection is relatively unnecessary. Other, more specific details regarding digital voice protection are available, but I do not feel that it is in the best interests of those agencies involved to divulge this type of exact information. I hope that what I have felt free about divulging clears up a little of the mystery which seems to surround the current rage over DVP.

ANOTHER FUROR OVER SCANNER INTERACTION

I received a letter recently from LEE (IL-140) states:

" Images can also be used to eliminate scanner interactions. 460.175 on my Bearcat 220 used to interfere with 470.7875, 470.5625, and 470.6625 on my 210XL. By programming the images into my 210XL, lock-ups and interactions are eliminated even though the units are side-by-side. What else can be done to eliminate interactions other than physical separations of units or antennas??"

Well, LEE, this is a good question, and your particular solution of using the images to do the reception is a clever one. It's a shame that the current crop of receivers have image rejection that is so poor so as to allow this kind of fooling around. Please keep in mind that any receiver worth its salt will not normally respond to signals on its image frequency, and the only reason that scanner receivers do so is that the "track-tuned" RF amplifiers are not nearly as tightly tuned as those which utilize conventional tuned circuits.

Outside of using the trick that you described to us, all I can give in the way of recommendation would be to keep the cases tightly secured to the receivers, ground their chassis to a good earth ground with a short length of copper braid, and keep the antennas separated as far as possible from one another. Unfortunately, the physical layout of most scanner receivers will allow signals from the local oscillator to leak backwards around the mixer and RF amplifier and out onto the antenna lead; and when this happens it is virtually impossible to prevent this signals from being radiated and causing lock-up in near-by receivers. To modify these receivers to prevent this type of radiation would require the installation of internal shields and baffles in order to prevent leakage of signals back through the active circuitry, and this is a design modification which has to be handled individually radio by radio. Short of doing that, I would advise that you install extra screws to secure the case to the chassis,

ground the chassis to an earth ground, and keep the antennas for the two radios separated as far as possible. I hope this information will be of help to you, LEE, and thanks for your letter.

BEARCAT 250 MODIFICATIONS FOR CTCSS AND MEMORY

A letter from JORGE (FL-034) asks: "I have been wanting to modify my Bearcat 250 for some time now but I don't know if I can do to it what I need. First of all I would like to install a CTCSS which I can switch on and off so that only signals with a pre-programmed tone will be heard. I am pretty sure this can be done, but don't know where to connect it to the squelch circuit. It would be most convenient if I could replace the "auto-squelch" with my CTCSS, but I don't know how to do it.

My second modification is a bit more complicated, but here goes. How could I add a second memory unit to my 250 so that I could alternate between Bank A ch's 1 to 50 and Bank B ch's 1 to 50? Or is this totally impossible??

Well, neither one of your modifications is totally impossible, JORGE, although the first one is a lot easier to achieve that the second. To add CTCSS decoding to your BC-250, the first thing that you would need is a CTCSS decoding circuit, such as the one sold by Communications Specialists, 426 West Taft Avenue, Orange, CA 92667 (714) 998-3021.

Once this circuit has been obtained, which by the way will operate just beautifully from the 12-volt supply of the BC-250, it is merely necessary to connect the output of the CTCSS tone decoder so that when the squelch control is rotated fully counter-clockwise and into the "auto" position, the normal squelch action is inhibited and the receiver squelch could then be controlled by the output of the CTCSS module. I have been looking high and low for my BC-250 service manual so that I can give you some more specific information, but for the purposes of this issue I will have to limit my discussion to less specific data and save the exact stuff for a later issue. I promise to research this question and do a follow up, since the BC-250 is such a popular radio and the CTCSS question is one of great general interest.

The second part of the question, that of adding a second memory bank to the BC-250 so that two separate groups of 50 channels could be scanned, is also fairly easy. The memory chips used in the BC-250, and most other computer products as well, are oriented toward "buss" configuration. This means that many chips can share a common set of address and data lines and only that one which has been selected will have access to the buss. This is the method that modern computers use to expand their memory capability--more memory chips can be added onto the buss and simply addressed and selected when it is desired to use them.

Applying this technique to the memory space in the BC-250, it should be possible to simply "piggy-back" another memory chip on top of the existing one in the BC-250, connecting all lines in parallel except the "CS" or chip-select line, that line which activates the memory and causes it to accept address information and output data to the buss. This chip select line can be manipulated by means of a switch (in which case the banks would be manually selected) or by decoding some of the upper address bits (in which case the BC-250 would in effect become a 100-channel scanner. I promise that as soon as I dig out the service manual I will make some more specific recommendations based on the actual circuit diagram.

Well, that's about all for now, folks. Thanks for your cards and letters, and please keep them coming! Until then, best listening and we'll be seeing you next month.

Public Safety

This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for police, sheriff, fire forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway and street maintenance, port authority/ bridge maintenance, animal control, ambulances, paramedics, hospitals, life guards, ski patrol, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional editors of Public Safety, who are listed below.

PUBLIC SAFETY - CENTRAL

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Tennessee, and Texas to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301

Send material and questions for Illinois, Indiana, and Wisconsin to: John Arendt, 327 Boulder Hill Pass, Oswego, Il 60543.

Greetings! Welcome to another edition of PS-Central. Again, I must ask for patience as it sometimes takes a week or two to answer all the mail. My workload has been decreased and the column undoubtedly improved with the addition of Ken Pehl's sub-column. And all three of us certainly appreciate your self addressed stamped envelopes. We're just about ready for the Spring Festival. Hope to see many of you there. We have a great day planned for all. Truly a memorable event, and photos will appear in an upcoming Newsletter. Keep on sending in those great frequencies- and don't forget system details, call signs, unit numbers, 10-codes, etc. If possible, you'll save a little work for us if you can type the information in a column no more than seven inches wide. But don't let that stop you-if you don't have access to a typewriter, just jot them down on a piece of notebook paper. We'll do the rest. Be sure to take that 'scanner' with you on that vacation trip. Need some specific frequencies for the areas we cover? Send us a note and a SASE. We'll try to help.

PS-CENTRAL CHAPTER SUMMARY

THE ST. LOUIS CHAPTER Contact Mike Redman, PO Box 1177, St. Charles Missouri, 63301; or call 314-946-4331. Meetings held at members' homes on the fourth Sunday of the month.

THE CHICAGO AREA CHAPTER Covers parts of Illinois, Indiana, Iowa, Wisconsin, and Michigan. Contact Ed Sirovy (IL-004), 311 South Williams St., Westmont Illinois, 60559. Past and future meetings covered in John Arendt's column.

OHIO VALLEY CHAPTER Contact Dave Nugent (IN-002), 2542 Birk Ave., Jasper Indiana, 47546. Dave's new chapter covers parts of Illinois, Indiana, and Kentucky.

MINNEAPOLIS-ST. PAUL CHAPTER Contact Chuck Steir (MN-008), 2910 E. Franklin Ave., Apt. 1405, Minneapolis, MN., 55406 if you live in that part of Minnesota or nearby Wisconsin.

NEW ORLEANS CHAPTER If you live in Louisiana or nearby Mississippi, contact Tom Monteverde (LA-003), 6029 Perlita St., New Orleans, LA. 70122

DETROIT CHAPTER Michigan members are invited to contact Larry Smith (MI-001), 1223 Vinsetta Blvd., Royal Oak, MI. 48067.

METROPLEX CHAPTER A New Chapter being formed in the Dallas/Fort Worth area. Contact Larry Van Horn, 1111 N. Carrier Parkway, Apt. B-107, Grand Prarie, Texas 75050.

Now, what's your excuse for not joining your local chapter? All chapters freely welcome guests to their meetings- particularly RCMA members visiting or passing through. Planning a vacation through a chaptered area? Write or call for the meeting dates. Be sure to send a self addressed stamped envelope for information. Do it NOW! PLANNING A CHAPTER? If you would like to organize a local chapter of RCMA in your area, contact the expert- Ed Sirovy- for all the details. Contact ED (With a SASE) at 311 S. Williams St., Westmont Illinois, 60559. Ed will get you on the right track!

MISSOURI

ELDON (MO-012) was kind enough to send along this information for monitoring in the Kansas City Missouri/Kansas area:

FIRE	
Kansas City Missouri:	154.130, 154.010, 154.445, 154.310
Lee's Summit	453.900 (F1/F2), 453.525 (F3/F4), 154.430
Raytown	154.370
Independence	154.310
Grandview	154.430
Greenwood	154.430
Lake Lotawana	154.430
Cass County (all)	154.400
Parkville	154.190
Clinton	154.430
Fire Mutual Aid	154.280
Kansas City Kansas	154.175, 154.310
Johnson County Kansas (all)	154.250, 154.070, 154.205
Lawrence Kansas	154.400
HOSPITAL/AMBULANCE	
Research Medical Center	155.280
Independence Medical Center	155.175
Truman Medical Center	155.160
HEAR Network (statewide)	155.340
MARCER (ambulance disp.)F1	460.525
MARCER (ambulance disp.)F2	460.550
Red Cross	47.42
St. Joseph Hosp. Life Flite	464.625
Physician's Exchange	47.66
Belton Civil Defense	155.145, 154.400, 147.120
POLICE	
Kansas City MO:	154.710 (N), 154.740 (C,S), 154.890 (S) 154.860 (C), 155.640 (Citywide), 156.09 (E) 155.850 (Tact 1), 159.210 (Tact 2), 159.030 (Tact 3)
Kansas City KS:	155.610 (1 [N]), 155.430 (2 [W]), 155.190 (3 [S]), 154.950 (Tact)
Overland Park KS:	460.100 Detectives, 460.375 South, 460.500 North, 460.225 Tact 6
Shawnee KS:	460.075, 460.175
North KCPD MO:	460.125 (F1), 460.125 (F2 Direct)
Grandview MO:	155.550

Belton MO:	453.600 (F1), 453.600 (F2 Direct)
Raymore MO:	155.730, 155.835
Harrisonville MO:	155.070
Independence MO:	453.850, 155.310, 453.800, 453.300
Pleasant Hill MO:	155.730, 155.760
Blue Springs MO:	155.670
Lee's Summit MO:	159.090 (F1), 156.030 (F2), 155.910 (F3)
Liberty MO:	154.800
Riverside MO:	155.565
Lenexa:	453.450, 460.250, 460.325, 460.450, 460.05
Wyandote County:	155.520
Leavenworth County:	39.700
Johnson County KS:	158.730/159.150 (North), 158.775/159.030 (South)
Raytown MO:	460.025
Cass County:	155.685
Harrisonville:	155.880 (Local Government)
Lee's Summit:	155.940 (Local Government)
Leawood:	453.950
Sugarcreek:	155.880
Jackson County:	155.790, 155.970
Platte County:	155.250
Clay County:	155.700

MISCELLANEOUS:

Six Star CATV	463.250
John Knox Village	463.575
WDAF/KYYS	450.0875,161.760, 166.250
KMBC TV9	450.1875,161.700
KCMO TV5	161.760, 170.150, 450.450
KC Star	173.225
KMBZ	161.670
KCKS	451.025
L.S. CD	46.580

Many thanks to Eldon for that enlightening and complete listing.

Now we are delighted to present another in a series of reports on Metro St. Louis Hospital Radio Communications. Part 1 can be found in the Communications Profile column, Part 2 is explained here. Most complete and explanatory-a fine contribution, by the editor of a number of other famous St. Louis area reports, Dave Crowley, (MO-009):

ST. LOUIS MISSOURI: METRO AREA HOSPITAL RADIO COMMUNICATIONS

This is the second part of the series covering EMS (Emergency Medical Service) radio communications in the St. Louis area. The first part appeared as a "Communications Profile" in the May 1981 RCMA Newsletter and dealt with EMS radio from the perspective of ambulance dispatching. In contrast to the ambulance data, the hospital radio system can be assembled into a single table as shown here.

In this area, hospital radio communications fall under the purview of the Hospital Association of Metropolitan St. Louis (HAMS) which supervises both the VHF HEAR (Health Emergency Administrative Radio) network as well as the UHF telemetry system. The working frequency for the HEAR net is 155.340 MHz simplex, for which both ambulances and hospitals are equipped. The usual method of contact in the HEAR system is through a seven-digit code which dialed just like a telephone on a rotary dial mounted on the control head of the ambulance radio or, in hospitals, on the HEAR console. Each hospital in the system has a

unique dial code which, under routine conditions, must be received to trigger an alerting tone which should summon an individual to answer the radio call by lifting the HEAR telephone handset. In urgent cases there is an all-call code: 1-3333 which can be dialed to alert all participating hospitals.

As the VHF system has evolved, the seven-digit dial codes are being replaced with standard sub-audible CTCSS (Continuous Tone-Coded Squelch System) tones for each hosptial with an all-call tone at 210.7 Hz. The intent of this conversion to relieve the ambulance driver of the need to look-up and dial the seven digit number. The seven digit code access sytem has posed a problem for Illinois ambulances, which have never needed a dial head to communicate with Illinois hospitals and are therefore unable to raise a Missouri hospital when transporting a patient across the river. The Hospital Association is aware of this problem, and is expected to coordinate the assignment of the new CTCSS tones to provide better access for ambulances crossing the river enroute to hospital on either side.

The structure of the VHF HEAR system may best be understood in terms of its provisions for EMS communications in the event of disaster. For this purpose the metropolitan St. Louis area is divided into seven EMS communications regions with a net control hospital designated for each as shown by asterisks in the table. Under the HEAR disaster plan, net control hospitals will communicate with each other on 155.280 and with hospitals within their region on 155.340. When informed of an "Emergency Alert" personnel at each participating hospital are supposed to press the Emergency button on the HEAR console permitting them to monitor all the traffic on 155.340 and 155.280 by disabling the dial- or tone-coded squelch circuit. Net control hospital have a "REG" (for regional frequency) button on the HEAR console which selects 155.280 as the transmit frequency. In both emergency alert and routine circumstances, the HEAR plan designates 155.220 in Missouri and 155.160 in Illinois for ambulance-to-hospital communication.

To summarize, the HEAR system as intended assigns:

155.340 MHz for routine hospital-to-hospital communication,
155.220 MHz for VHF ambulance-to-hospital communication in Missouri,
155.160 MHz for VHF ambulance-to-hospital communication in Illinois,
155.280 MHz for emergency communications among the five net control hospitals.

In actual practice, operation of the HEAR system deviates from the official plan in several important aspects:

1) The vast majority of ambulance-to-hospital traffic is transmitted on 155.340 MHz, with dial access in Missouri and CTCSS access in Illinois.
2) In Illinois, 155.280 MHz is used, with dial access, for routine communications between hospitals.
3) In Missouri 155.280 is seldom guarded (Continuous monitoring with closed squelch)

In addition to the VHF HEAR system, many hospitals and ambulances in this area are equipped with the UHF telemetry channels. The guard channel for each hospital is shown, in the table, by a circled channel number. If you are not familiar with these channels, see part one of this series or Police Call inside the front cover. Note also in the table that four non-medical entities have EMS radio capabilities.

The column designated EMS CAT does not pertain at all to radio communication but indicates the relative scope of emergency care available at the particular hospital, four categories in Missouri, three in Illinois. This information would be very useful when monitoring EMS channels during a disaster or other large-scale medical emergency.

The three U.S. Government hospitals in this area are not included in the Hospital Associations EMS communications plan. In Missouri the VA hospitals use 164.500 MHz (KAZ396) and 168.525 MHz (KAZ2596) for paging and security. Scott AFB in Illinois is assigned EMS frequencies by IRAC.

As mentioned in part one, we have no central facility to direct EMS communications traffic on a day-to-day basis. Moreover local hospitals frequently leave their radio systems turned off. As a result of these circumstances, EMS radio communication gives the impression here of a catch-as-catch-can system, especially on the VHF channels. Thus in a significant number of cases, the EMTs and paramedics no longer attemp to raise certain hospitals on the HEAR system, but relay important information via the fire dispatcher who calls the hopital by telephone.

continued

R.C.M.A. Gets "Written Up"

The magazine Changing Times did a write up on scanners in their April 1981 issue. The article is a good one, telling the good, interesting side of our hobby. They also listed numerous popular scanners on a comparison chart, for the buyer looking for a new scanner. The article also featured a frequency spectrum chart, starting at 0.5 MHz thru 512 MHz. Three monitoring hobby clubs were mentioned, with RCMA being on top! Check it out!

INFO: A tour of the new "VERDUGO" fire dispatch center has been made available to RCMA members in the Southern California area. VERDUGO is the new centralized fire dispatch center serving Burbank, Glendale and Pasadena Fire Departments. The tour will be at 8 P.M. on Friday, May 15, 1981. (Normal meeting night).

SATELLITES

Bill Blomgren, Editor

Send information about satellite frequencies which you have received with type of traffic heard, orbital data, hobby receiving equipment and antennas and questions pertaining to satellite monitoring to: Bill Blomgren, 112 Sandra Lane, Normal, Il 61761.

NO COLUMN THIS MONTH

METROPOLITAN ST LOUIS MISSOURI - HOSPITAL EMS RADIO

	HOSPITAL	VHF H.E.A.R. Channels 155.340	155.220	155.160	155.280	EMS REG	EMS CAT	UHF TELEMETRY CALL	UHF TELEMETRY CHANNELS
1	ALEXIAN BROS HOSP	KSK-910	KSK-910	-	-	I	MO2		
2	ALTON MEM HOSP	KWI-679	-	KWI-679	KXC-771	4A	IL2		
3	ALTON STATE HOSP	KJE-974	-	-	-	4A	-		
4	BARNES MED CNTR	KRY-998	KYN-907	-	-	I	MO1	KXZ-434	(5) 4,6,8
5	BETHESDA GEN HOSP	-	-	-	-	I	MO2		
6	CARD GLENNON MEM HOSP	KGI-595	KVI-559	-	-	I	MO1		
7	CENTRAL MED CNTR	KSK-909	-	-	-	I	MO2		
8	CENTREVILLE TWSP HOSP	KIZ-292	-	-	KIZ-292	4C	IL2		
9	CHRISTIAN HOSP NE	KBJ-932	KBJ-932	-	-	II	MO1	WXM-708	(5) 1,2,8,10
10	CHRISTIAN HOSP NW	KSK-912	KSK-912	-	-	II	MO1	WXM-708	(5) 1,2,8,10
11	COCHRAN VA HOSP	-	-	-	-	I	-		
12	COMMUNITY HOSP E ST LOUIS	KIZ-353	-	-	KIZ-353	4C	IL2		
13	COMPTON HILL MED CNTR	KSN-258	-	-	-	I	MO4		
14	DEACONESS HOSP	KSK-452	KYN-898	-	-	I	MO1	KSK-452	(7) 4,6,8
15	DE PAUL COMM HLTH CNTR	KSK-920	KSK-920	-	-	II	MO1	KXZ-427	(8) 1,6,7
16	FAITH HOSP	KSK-908	KSK-908	-	-	II	-		
17	HST RESTORATIVE CNTR	-	-	-	-	I	-		
18	HOMER G PHILLIPS HOSP	KSN-226	KSN-226	-	-	I	MO1	KXA-247	(4) 2
19	INCARNATE WORD HOSP	KRV-286	KRV-286			I	MO2		
20	JEFF BARRACKS VA HOSP	-	-	-	-	III	-		
21	JEFF MEM HOSP	KOB-718	-	WXK-680	-	III	MO3		
22	JEWISH HOSP ST LOUIS	KRM-913	KRM-913	-	-	I	MO2	KXZ-431	License only
23	ROBERT KOCH HOSP	-	-	-	-	III	MO4		
24	LINDELL HOSP	-	-	-	-	I	MO4		
25	LUTHERAN MED CNTR	KSK-907	KYN-891	-	-	I	MO2	KXZ-430	License only
26	MALMCOLM BLISS MNT HLTH CNTR	-	-	-	-	I	-		
27	MEMORIAL HOSP BELLEVILLE	KCP-612	KCP-612	KWF-792	KYG-612	4C*	IL2	KON-221	(3) 6,7,8
28	MIDWEST GEN HOSP	-	-	-	-	III	-		
29	MISSOURI BAPTIST HOSP	KSK-917	-	-	-	III	MO2		
30	NORMANDY OST HOSP NORTH	KUJ-697	KUJ-697	-	-	II	MO1	KYO-388	(6) 5,7,8
31	NORMANDY OST HOSP SOUTH	KUJ-696	KUJ-696	-	-	III	MO2	KYO-387	(6) 5,7,8
32	OLIVER C ANDERSON HOSP	WZZ-970	-	WZZ-970	WZZ-970	4A	IL2		
33	ST ANTHONY'S HOSP ALTON	-	-	-	-	4A	IL3		
34	ST ANTHONY'S MED CNTR	KYN-887	KYN-887	-	KYN-887	III	MO2	KZB-287	(3) 1,2,4
35	ST ELIZ HOSP BELLEVILLE	KIZ-352	-	-	KCE-678	4C	IL2		
36	ST ELIZABETH'S MED CNTR	KVG-731	-	KWF-793	KWL-251	4A	IL2		
37	ST FRANCIS MERCY HOSP	KLU-318	KLU-318	KLU-318	-	III	MO2		

METROPOLITAN ST LOUIS MISSOURI - HOSPITAL EMS RADIO (CON'T)

	HOSPITAL	VHF H.E.A.R. Channels 155.340	155.220	155.160	155.280	EMS REG	EMS CAT	UHF TELEMETRY CALL	CHANNELS
38	ST JOHN'S MERCY MED CNTR	KSK-918	KYN-910	-	-	III	MO1	KXC-770	(2) 3,6,8
39	ST JOSEPH'S HOSP ALTON	KWI-679	-	KWI-679	KXC-771	4A	IL2		(3) 6,7,8
40	ST JOSEPH'S/CLINTON CO HOSP .	KAA-673	-	-	KZW-807	4D	IL3		
41	ST JOSEPH'S HOSP HIGHLAND ...	WYV-463	-	WYV-463	WYV-463	4A	IL3		
42	ST JOSEPH'S HOSP KIRKWOOD ...	KSK-906	KYN-888	-	KYN-888	III*	MO2	KXZ-429	(1) 4,5,8
43	ST JOSEPH'S HOSP ST CHARLES .	KRS-302	-	KRS-302	-	IV	MO2	WYZ-561	(4) 3,7,8
44	ST LOUIS CITY HOSP	KSN-225	KSM-949	-	KSM-949	I*	MO1	KXA-247	(2) 4
45	ST LOUIS CHILDREN'S HOSP	WSX-451	KYN-893	-	-	I	MO1		
46	ST LOUIS CO HOSP	KSM-855	KYN-909	KXD-294	KSL-265	II*	MO2	KUQ-647	(5) 1,2,3,6,8
47	ST LOUIS EYE HOSP	-	-	-	-	III	-		
48	ST LOUIS STATE HOSP	-	-	-	-	I	-		
49	ST LOUIS STATE SCH & HOSP ...	-	-	-	-	II	-		
50	ST LOUIS UNIV HOSPS	KVI-559	KVI-559	-	-	I	MO1	KXZ-432	(1)
51	ST LUKE'S HOSP EAST	KSK-915	-	-	-	I	MO2	KXZ-435	License only
52	ST LUKE'S HOSP WEST	KYN-886	KYN-886	-	-	III	MO2		
53	ST MARY'S HOSP E ST LOUIS ...	KIZ-303	-	-	KXC-772	4C	IL2		
54	ST MARY'S HLTH CNTR	KRV-287	-	-	-	III	MO1	KXZ-433	(8) 2,5,6
55	ST MARY ON THE MOUNT HOSP ...	-	-	-	-	I	MO4		
56	ST PETERS COMMUNITY HOSP	KAE-541	-	-	-	IV	-	KAE-541	(8) 3,4,7
57	SCOTT AFB HOSP	IRAC	-	IRAC	IRAC	4C	-		
58	SHRINER'S HOSP	-	-	-	-	III	-		
59	WOOD RIVER TWNSHP HOSP	KKQ-817	-	KKQ-817	KKQ-817	4A*	IL2	KKQ-817	(3) 6,7,8
	AGENCIES								
	HOSP ASSOC - ST LOUIS	KTC-866			KSL-267	I			
	ST CLAIR CO CIVIL DEF		KTC-730	KWF-944	KGR-302	4C			
	ST LOUIS DISAST OPER OFF	KMK-587				I			
	ST LOUIS COUNTY POLICE	WRA-409	WRA-409		WRA-409	II		WRA-409	1,5,6,8,9,10

REGIONS: I - ST LOUIS MO CITY
II - ST LOUIS MO COUNTY NORTH
III - ST LOUIS MO COUNTY SOUTH JEFFERSON & FRANKLIN CO
IV - ST CHARLES MO COUNTY
4A - MADISON COUNTY IL
4C - ST CLAIR COUNTY IL
4D - CLINTON COUNTY IL

EMS CATEGORIES: MO1 - REGIONAL EMERGENCY HOSPITAL
MO2 - AREA EMERGENCY HOSPITAL
MO3 - COMMUNITY EMERGENCY HOSPITAL
MO4 - FIRST AID & REFERRAL
IL1 - COMPREHENSIVE EMERG SERVICES
IL2 - BASIC EMERGENCY SERVICES
IL3 - STANDBY EMERGENCY SERVICES

*REGIONAL NET CONTROL HOSPITAL

ILLINOIS, INDIANA, MICHIGAN, WISCONSIN

Greetings and welcome aboard to the beginning of summer. Vacations start this month, so make the best of them and take along those synthesized radios. A spot check of CB shops, etc. at your destination will usually reveal some of the local area freqs. to enjoy while you're "away" from home." (A full set of "Police Call" directories is also a boon to the traveler and well worth the special price-as offered by the publisher in NJ). For those of you that are driving, a synthesized radio can easily be placed in the vehicle with an antenna rigged up accordingly. (Best to inquire about the legality of mobile monitoring in the states you're passing thru. With the restrictions on "mobile units" in MI and IN - as well as the neighboring states of KY and MN - you "listen at your own risk" while passing thru these states).

There's no better way to get the summer started off with an "RCMA bang" than to make it down St. Louis way for the big "Spring Festival" on June 6th. Barring any unforeseen difficulties, I should be down that way to "meet and greet" those in attendance and also to be a guest lecturer.

Although no special extravaganza is on tap up here in the Chicago area, any out-of-area members passing thru or on vacation are cordially invited and most welcome to attend the Chicago Area RCMA Chapter sessions scheduled for June 14th and August 8th at Nancini's Restaurant in west suburban Berkeley. (It's close to expressways and only a few miles from the O'Hare Airport).

Now that the introductory remarks are over, it's time to get down to the business at hand.

MORE ILLINOIS STATE POLICE NEWS

1. First of all, a correction to my March column. Dist. 18-Litchfield also has jurisdiction over Calhoun County (formerly part of Dist. 14A).
2. As reported by Chuck (IL-141) and confirmed by Tom (IL-030), Dist. 11 has moved its headquarters from Maryville to Edwardsville (new site on the campus of the branch of Southern IL University).
3. Jeff (IL-064) and Tom (IL-030) report that Dist.4 will be moving its headquarters from Crestwood to Tinley Park (new site on the grounds of the former mental health center).
4. Mike (IA-011) and Tom (IL-030) report that Dist. 1 will be moving its headquarters from Sterling to Dixon (new site on the grounds of the Dixon Developmental Center) within a year.
5. Mike (IA-011) and Tom (IL-030) also report that Dist. 7 will be moving its headquarters from Rock Island. The new site is believed to be in the E. Moline area - possibly on the grounds of the former mental health center.

The moves were mainly due to space limitations at the present sites. In some cases, towers and radio transmitters will not be moved but will be controlled by microwave links between the old and new sites. More information- as made available- will show in this column.

STEPHENSON COUNTY, IL S.D. ADOPTS "PSAP" By the time this column is read, base and mobile operation on 155.055 will be authorized. The county board has designated the S.D. as a PSAP center and answering point. (The contributor prefers that he remain anonymous).

ADDITIONAL WHITESIDE COUNTY, IL S.D. INFO

1. Local units dispatched by the S.D. (courtesy of Mike IA-011):

Albany squad	WH53
Erie squad	WH46-47
Fulton squads	WH60-61
Lyndon squad	WH56
Morrison squads	WH40-41
Prophetstown squads	WH50-51

2. Misc. units dispatched by the S.D. (courtesy of an ex-member):

Radio Repair	WH76,94
Sergeants	WH77-78
Coroner	WH79
Deputy	WH93
Probation Dept.	WH95
Dog Catcher	WH96
Portables	WH10 series

MORE INDIANA STATE POLICE NEWS Courtesy of Dave (IN-002) - our "resident expert" on the subject.
The organization is now divided up into five different areas - each area consisting of three or four districts. Present alignment as follows:
Area I (Lowell) consisting of Dist. 11 - Toll Road (Chesterton), Dist. 12-South Bend, Dist. 13-Lowell, and Dist. 14-Lafayette.
Area II (Ft. Wayne) consisting of Dist. 21-Ligonier, Dist. 22-Ft. Wayne, Dist. 23-Peru, and Dist. 25-Redkey.
Area III (Evansville) consisting of Dist. 32-Terre Hauet, Dist. 33-Bloomington, Dist. 34-Jasper, and Dist. 35-Evansville.
Area IV (Sellersburg) consisting of Dist. 41-Connersville, Dist. 42-Versailles, Dist. 43-Seymour, and Dist. 45-Sellersburg (NOTE: The area HQ and dist. have apparently moved from the listed "Charlestown")
Area V (Indianapolis) consisting of Dist. 51-Pendleton, Dist. 52-Indianapolis, and Dist. 53-Putnamville (NOTE: Area V was carved out of districts formerly in other areas).

Each area is supervised by a captain and three lieutenants. Each district is supervised by a first sergeant and several line sergeants.

Moving on to unit designation and numbering data:
Very briefly, a unit with a single digit prefix (i.e. 1,2,3,4, or 5) is an "area" unit and a unit with a two digit prefix is a "district" unit. Some examples are as follows:
"2-1" Captain of Area II
"1-3" Lieutenant on staff of Area III
"34-1" First Sergeant of Dist. 34
"13-3" Line Sergeant of Dist. 13

Some very brief into on district designations: __-1 thru ___-10 Administrative and Line Command. ___-11 thru ___-79 Road Troopers (Consecutive #s are assigned to a given county, say 11 to 15). ___-80 thru ___-89 Investigative. __-90 thru ___-99 Motor Carrier (Truck Detail). (There is an exception. Dist. 13-Lowell has road trooper numbers going up into the three digit series due to the large amount of units concentrated in that part of the state).

To supplement last month's miscellaneous unit designators, the "55" prefix is assigned statewide to chaplains ("55-35" would be the chaplain for Dist. 35).

All other units are of a confidential nature.

Thanks are in order to Dave for a most comprehensive contribution. (Final but important note: This plan was in effect as of the end of Feb. and is subject to change at any time).

KOKOMO, IN P.D. INFO Courtesy of Mark (IN-014): Ch. 1 155.565 pptr. out (155.910 in)-Dispatch KSA935. Ch. 2 154.740 simplex- Investigators KZA238 (CID,JID,SID units). Mobile units are of the 100 and 200 series. (500 series units belong to the Howard County S.D. and have access to Ch. 1).

MARION, IN F.D. INFO Courtesy of Mark (IN-014):
154.190 City dispatch and operations
154.250 Rural dispatch (covers Centre Twp., Washington Twp., and Van Buren).
154.280 Mutual aid.

"LIFELINE" HELICOPTER Courtesy of Mark (IN-014): The Methodist Hospital in Indianapolis operates a statewide emergency helicopter service called LIFELINE. It is staffed 24 hours a day for service to any part of the state. It is one of only three such services in the country that sends a doctor on every run. It has been monitored on the 155.340 IHERN freq. on several occasions. Other freqs. believed to be in use include the UHF "MED" freqs. for telemetry and possibly some law enforcement freqs. Any further info. on this subject would be appreciated.

MADISON, IN AREA FREQS. Courtesy of Jeff (KY-023)
154.890 Jefferson County SD Car-to-Base
155.130 Jefferson County SD Base-to-Car & Car-to-car
154.250 City & County Fire Depts.
154.100 Madison State Hospital
460.350 rptr. out Madison PD
All Jefferson County fire depts. (volunteer) are dispatched through the sheriff's dept. All Madison city fire dept. units are dispatched through the city police dept. Jefferson County SD units use the #39 prefix (alphabetical sequential order for that particular county).

MILWAUKEE, WI COUNTY FREQ. LIST Supplementing their comprehensive contribution for Milwaukee city in the April newsletter, George (WI-004) and Tom (WI-006) have passed on another excellent contribution. Details as follows:

SHERIFF AND CORRECTIONS
153.980 B/M - House of Correction - Security
154.875 rptr. (KWX836) & simplex (KJ2873) - Mitchell Field Security
(rptr. input is on 156.090)
453.100 rptr - Sheriff F3 & F4
453.225 rptr - Sheriff F1
453.425 rptr - Sheriff F5 & F6
453.500 rptr - Sheriff F2
453.650 rptr - Neighborhood Security
453.875 rptr - Institutions Security F7 & F8

HOSPITALS/AMBULANCES/PARAMEDICS
152.0075 Base (KEX301) - General Hospital Pager
155.280 Base & 155.340 B/M - General Hospital & Medical Complex
155.400 B/M (KDG307) - General Hospital
462.950 B/M - Hopsital/Ambulance Net (North)
462.975 B/M - Hopsital/Ambulance Net (South)
The 463/468MHZ paramedic freq. "pairs" are in use. Low-power 458MHZ paramedic freqs. are also in use - H/T's.

TRANSIT SYSTEM
44.480 B/M (KSH632) - Transit Supervisors
453.475 rptr - Transit F4
453.675 rptr - Transit F2
453.750 rptr - Transit F3
453.850 rptr - Transit F1
453.925 rptr - Transit

OTHER COUNTY SERVICES
30.800 Base (KRZ533) - War Memorial
45.160 Base (WSI954) - Emergency Govt.
151.295 B/M (KVM455) - Zoo, (KTA959) - Stadium, (no call) - McKinley Marina
154.025 B/M - Mitchell Field Administration & Operations
154.295 B - Intersystem with Fire Depts.
453.375 rptr - Emergency Govt.
453.525 rptr - (KKH538) - Performing Arts Center,
(KKH539) - Buildings & Grounds
(KEU855) - Museum
453.775 rptr - Highway Dept.

MISC. FIRE NETWORK FREQS. Walter (WI-009) has sent in the following three freqs:
39.580 - used in the Kewaunee County area
45.480 - used throughout Door County
155.820 - used in the town of Algoma

EAU CLAIRE, WI P.D. INFO From Bob (WI-001): The old 2 channel "portacoms" are being replaced with new 4 channel scanning head "portacoms". Two new low-power rptrs have been put into use (inputs unknown). The freqs. in use are:
155.130 rptr out (158.970 in)
154.980 rptr out (158.940 in) (shop-special occasions)
155.025 rptr out (?? in)
154.115 rptr out (?? in)

RUSK COUNTY, WI S.D. INFO From Bob (WI-001): A new rptr. system was recently placed into service for a short time. The radio freqs. (155.700 out, 154.710 in) and tone squelch freq. were identical to a system found in nearby Bloomington, MN. The system had to be taken out of service due to the resulting interference. When Bob monitored the system, he found it to be a simulcast of the existing SD rptr. (155.625 out, 158.790 in).

LA CROSSE COUNTY, WI S.D. INFOR. Bob (WI-001) reports that a rptr. system has been placed into service (output presumed to be 155.430)-the input being unknown.

ROCK COUNTY, WI S.D. INFO When Bob (WI-001) came down this way for a visit last summer, he reported extensive changes in the Rock County S.D. radio system. Exact freq. uses were not completely discovered until just recently. They are summarized as follows:

Ch. 1	155.985	simplex	
Ch. 2	159.090	rptr. out (155.985 in)	Dispatch
Ch. 3	158.730	simplex	Car-Car
Ch. 4	154.800	simplex	Local Use

With those WI news items, this column approaches its end. Let's hear from you members over in MI - I'm sure there's news and views that you have to pass on. Something to remind everyone about - my December column will feature hwy. maintainence freqs. for the four states. I am in need of information from IN and the northern peninsula of MI. Please send these contributions during the month of August, as the Dec. column "goes to press" right after Labor Day.

Now that the grim reminder of upcoming colder weather (and snow) has been brought up, it's time to say

Happy Monitoring!

ALABAMA, ARKANSAS, LOUISIANA, MISSISSIPPI, OKLAHOMA, TEXAS

Send information, frequencies, system details, etc. for these states to Ken Pehl (TX-003), 108 E. Centre St., Fredericksburg, Texas 78624 and let's keep Ken's mailbox as full as mine.

Greetings and welcome to the June edition of this sub-column. It seems strange to be saying that as I am writing this in the early part of March. The March newsletter arrived a few days ago and I have not even finished reading it (shame on me!). The February column had some information on the Houston area frequencies but even as I'm writing this column a number of things have already changed down in the Bayou City. Since it will be awhile before this column will be in print and since reader's input has yet to begin (no one knows I'm

column editor yet), I'm sure readers will not mind a repeat on the subject of Houston area systems. Indeed, readers near the city of Houston may be most anxious for some news on the new changes by the time this is in print. I would like to most gratefully thank ED LENTZ, (TX-045) for his help in supplying much of the information in this column. Without his help this month's column would be very empty.

The biggest news that has taken place is the re-arrangement of the Houston PD patrol areas and accompanying frequencies. HPD has split the former southwest and northwest patrol areas each into two additional areas with two new frequencies being activated. The southwest area has been split into a south-central area and a new southwest area. The northwest has likewise been split into two new areas. At this time it is assumed to be named north central and (new) northwest areas. The two new areas are continuing on the former frequencies, while the newly re-organized southwest and northwest areas have obtained the two new frequencies. In addition, the HPD recently changed all their unit numbers to signify their patrol beats. A lot of info is still missing on the unit numbering scheme and will not be included in this column at this time. Members with info involving the HPD unit numbering system are very much encouraged to write in their ideas on the matter. In fact, do it now before you forget! Hopefully there will be some news in the near future.

Other changes of significance are the park police are now on the regular patrol area frequency in which they are located. Frequencies will no longer be referred to by a channel number but rather by the area/use name, for example, southwest channel, northwest channel, etc. The SWAT channel has been moved to another frequency. The frequency/channel formerly used by the detectives and park police together is now used by motorcycles in traffic control and by other solo unit vehicles with the detectives moving to their own channel.

So now let me summarize what all has been done by listing again the HPD radio channels:

HOUSTON POLICE DEPARTMENT (Callsign: KKD 490--all ch.)

Channel	Frequency	Use
North Central	460.325 R	N. Central patrol area
Northeast	460.125 R	N.E. " "
Southeast	460.025 R	S.E. " "
South Central	460.050 R	So. Central " "
Central	460.100 R	Downtown " "
Southwest	460.150 R	S.W. " "
Northwest	460.475 R	N.W. " "
Info	460.425 R	License checks, etc.
Solo	460.350 R	Motorcycles/Traffic Control
Car to Car	460.225 M	Car-to-car (simplex use)
Detectives	460.450 R	Detectives/Homicide/Theft div.

For those who are interested, both the Houston Police Department and the Houston Fire Department are on a microwave "voter" receiving system. No, it does not have to do with politics. For those not familiar with this kind of set up, I offer the following explanation of a basic 'voter' receiving system. I may be entering the technical editor's jurisdiction with this, so I hope no one minds my doing so.

A voter receiver system is a complex method of making sure that no matter where within the range of the system a portable or a mobile unit is, that portable or mobile unit will be heard well enough and clear enough to the dispatcher and, in the case of repeaters, to trigger the repeater with a clean and clear signal. Given the size of any large city with tall buildings, pavement, concrete, etc. to create rf deadspots all over the place, it is nearly impossible to place a repeater system so that <u>every</u> unit <u>anywhere</u> within the city will be able to hit the repeater with a good signal, this being particularly difficult with portable hand held units. The transmitter part of the repeater can usually be heard well by all the mobiles and/or portables no

matter where they are, if the repeater is well placed, unless an exceptionally large area is to be covered or terrain is a problem. It is the repeater's receiver or receiving that usually causes all the grief. So in a voter receiver system, there are a number of receivers, tuned to the mobile's frequency, placed at strategic locations throughout the city or area to be served by the voter system. These receiver's listen for any transmission from a mobile or portable just like a normal receiver would, of course. When a transmission comes in, these receivers recover the audio and by means of either leased phone lines or microwave transmitters, send the audio of what was heard over to some central location. At the central location, usually the main VHF or UHF transmitter site, all the microwave's or phone line's audio from these various receiver sites are compared by a device called a "voter comparator" (what else). This voter comparator then selects or "elects", if you want to call it that, which ever remote receiver has the signal and applys the audio to the repeater transmitter. In reality, the voter selects which ever signal is the best, as usually two or more of these remote receivers will be receiving the same signal. Only one signal is the best. More involved voter comparators will also take into consideration audio purity as well as signal strength and may do some audio processing. At least that is what a voter comparator is supposed to do. Needless to say the voting system takes only a split second to do all this as you can hear it on the repeater output, if a repeater is involved, almost as soon as the mobile keys the mike. That in a nut shell is how it works. I am not an expert in this subject and I am studying toward learning more about such matters. My explanation was only meant as a basic introduction to those unfamiliar. There could well be a few points incorrectly stated. I hope that the technical editor does not mind my venturing into his territory and hope this will spur some future articles in his column concerning the matter.

Moving along now to the subject of the Houston Fire Department, HFD has also seen a few changes since the report in the February column. Not only that but a very good list of HFD stations has been submitted by ED (TX-45). Thanks for sharing it with us, Ed! First, let me summarize the HFD radio channels, followed by an explantion of their channel useage.

HOUSTON FIRE DEPARTMENT
(Callsign KKE 498--all channels)

ch. 3	154.160	B	Fire Dispatch (VHF back-up)/ & paging primary
ch. 6	460.525	R	Ambulance dispatch (ambulance operated by HFD)
ch. 7	460.550	R	Ambulance (back up/communication)
ch. 8	460.575	R	Fire dispatch (simulcast with 154.160)
ch. 9	460.625	R	Fireground/multi-alarm use
-----	154.280	B/M	Fire mutual aid (in HFD fire chief and HFD district chief vehicles only)

At the present, these are the only frequencies known to be in active use. Dispatching of units is accomplished by microwave to the station being called on a run, with an outlet on the UHF frequencies as well, usually simulcast. This particular microwave system should not be confused with the voter receiving system described before. In the case of the fire channel on UHF, there is a back-up simulcast on VHF also. According to sources within the HFD, the microwave system is the primary dispatching band. Presumably, the UHF outlet serves as a means of keeping units in the field current on dispatching activity. It is believed that either a leased phone line or microwave linked teletype is also activated to provide a 'hard copy' of the dispatch action. Truck-to-dispatcher and truck-to-truck communication is on UHF. Usually, but not always, the truck-to-dispatcher communication is also simulcast on 154.160 from HFD ch. 8. The HFD ambulances are almost always dispatched out on HFD ch. 6, unless a FD truck is dispatched out on the same call, in which case it would be on ch. 3-460.575 and therefore simulcast on 154.160. At this time, it is believed that HFD fire vehicles and HFD ambulances have the same frequencies installed in their radios but rarely cross-over to the other's frequency--that is, a truck on the ambulance frequency or vice versa. If anyone can clarify, or expand on the above, please write in your thoughts, ideas, or proof, or whatever!

The following are the station locations with aparatus of the Houston Fire Department:

Station:	Location:	District:	Apparatus & chief personnel:
1	410 Bagby @ Preston	N 1	P,T,R,ST(2),D(2),DC,CO,HM
2	1500 W. Dallas @ Bailey	N 2	P,T,A
3	3735 W. Alabama @ Cummings	S 10	P,A
4	Housed at Station 16	S 4	
5	2020 Hollister @ Hammerly	N 11	P,T,DC,C
6	901 Henderson @ Decatur	N 1	P
7	1402 Elgin @ Austin	S 3	P,T,DC
8	1307 Crawford @ Polk	S 3	TP,S,A,SN
9	702 Hogan @ Freeman	N 1	P,T,A
10(32)	8614 E. Tidwell @ Mesa	N 2	DC,T,B
11	4520 Washington @ Fowler	N 7	P
12	1502 Alber @ Terry	N 5	P,A
13	2215 W. 43rd @ T.C. Jester	N 16	P,DC
14	107 W. 12th @ Yale	N 7	P,T,DC
15	402 Tabor @ N. Main	N 7	P
16	1700 Richmond @ Dunlavy	S 3	P(2),T
17	319 Sampson @ Preston	N 1	P,T
18	619 Telephone @ Lockwood	S 6	P,A,C
19	1801 Gregg @ New Orleans	N 5	P,T,A,DC
20	6902 Navigation @ 69th	S 6	TP,DC,R
21	10515 South Main @ Willowbend	S 4	P,T,R
22	7825 Harrisburg @ 78th	S 6	P,T,A
23	8005 Lawndale @ Broadway	S 6	P,SN
24	Closed		
25	3902 Scott @ Rosewood	S 3	TP,A
26	7111 Dixie @ Chaffin	S 9	P,T,DC
27	6302 Lyons @ Kress	N 5	P
28	5116 Westheimer @ Sage	S 10	P,T,DC
29	4831 Galveston Rd. @ Ariens	S 9	P,A,R,T
30	6702 Irvington @ Frisco	N 8	P,A,R
31	522 Crosstimbers @ Haygood	N 8	P,T
32	822 W. 34th @ Brinkman	N 16	P
33	7100 Fannin @ Braeswood	S 4	P,T,DC,A
34	2812 Berry Rd. @ Jensen	N 2	P,T,A
35	5535 Van Fleet @ St. Lo	S 9	P,A
(Hobby) 36	7720 Airport Blvd @ Dover	S 9	SP,CT,FT(2),J
37	3823 Aberdeen Way @ Braeswood	S 4	P
38	1120 Silber @ Hartland	N 11	P,T,R
39	5310 Pickfair @ North Loop E	N 5	P
40	5830 O.S.T. @ Black	S 6	P,T
41	805 Pearl @ Amarillo	N 12	P,T,DC
42	9525 Clinton @ Clinton Park	N 12	P
43	7330 N. Wayside @ Dockal	N 2	P,A
44	675 Maxie Rd. @ Church	N 12	P,T,A,B
45	4020 Banner (OST) @ Manitou	N 12	P
46	3902 Corder @ Scott	S 17	P,T,A,R
47	2615 Tidewater @ Alameda Rd.	S 14	P
48	11616 Chimney Rock @ Burdine	S 14	P
49	1212 Gessner @ Westview	N 18	P,A
50	4420 Bingle @ Malibu	N 11	P
51	6920 Bellaire @ Bintliff	S 19	P,T
52	10343 Hartsook @ Freewood	S 15	P,DC,B
53	13349 Vicksburg @ Uvalde	N 12	P
54	Houston Intercontinental Airport	N 13	SP,B,FT(2),LWT,CT(2),Roligon,J
55	11212 Cullen @ Selinski	S 17	P,DC,B
56	5820 E.Little York @ Maple Leaf	N 2	P

57	13602 Memorial Dr. @ Wilcrest	N 18	TP,T
58	10413 Fulton @ Sunneyside	N 8	TP,DC,A
59	13925 S. Post Oak @ Prudence	S 14	P,T,B,DC,A
60	2925 Jeannetta @ Clarkcrest	N 18	TP,A
61	9726 Monroe @ Swiss	S 15	P,T,B,A
62	1602 Seamist @ Droxford	N 7	TP,A,SN
63	5626 Jetero Blvd @ Lee Rd.	N 13	P(2),T,DC,TT,B,A
64	Temporarily assigned to 63		
65	27330 Wolf Rd., Huffman	N 13	P
66	5800 Teague @ Hardison	N 11	P,B
67	1620 W. Little York @ Willow	N 16	P,T,B,A
68	8602 Bissonnet @ S. Gessner	S 19	TP,T,DC,B,A
69	1102 West Belt @ Valley Forge	N 18	P,DC,T,B
70	11400 Sage Arbor @ Sage Down	S 15	P,A
71	16830 Diana Ln @ Bay Area	S 20	P,T,DC
72	2501 NASA Rd 1, Building #25	S 20	P,T,A
73	9410 Boone Rd. @ Bissonnet	S 19	P,A
74	11818 Airline @ Goodson		P,T

Apparatus abbreviations:

DCT= Dry Chemical Truck
D = Deputy Chief
DC = District Chief
P = Pumper
T = Ladder Truck
B = Booster
A = Ambulance
LWT= Lightwater Truck
CT = Crash Truck
TT = Tank Truck
FT = Foam Truck
R = Rescue Truck
HM = Hazard Materials Truck
ST = Supply Truck
SN = Snorkel
SP = Snorkel Pumper
S = Salvage Truck
C = Cascade Truck
CO = Communications Truck/Van
TP = Telesquirt Pumper
J = Jeep Patrol

Station Districts summary:

North Zone

District	Station #
1	1,2,6,9,17
2	34,43,56,10
5	12,19,27,39
7	11,14,15,62
8	30,31,58
11	5,38,50,66
12	41,42,44,45,53
13	54,63,64,65
16	13,32,67
18	49,57,60,69

South Zone

District	Station #
3	7,8,16,25
4	4,21,33,37
6	18,20,22,23,40
9	26,29,35,36
10	28,3
14	47,59,48
15	52,61,70
17	46,55
19	51,68,73
20	71,72

UNIT NUMBERS (partial listing)

1 Chief
2 Assistant Chief
5,6 Deputy Chief
100's District Chiefs (20 districts; e.g., 103 in Dist 3)
200's Pumpers (last two digits are station number; e.g., 203, based in Sta 3)
300's Ladder Trucks
400's Maintenance & Fuel Trucks
600's Fire Prevention Inspectors
700's Arson Investigators
800's ??
900's Airport Equipment
1100's Ambulances
1300's Communication Technicians
1500's Special Apparatus & Support Units:
500 Salvage

502 Communication Van
509, 510 Air Cascade Bottle Trucks
597, 598,599 Fire Boats
576 Canteen
508, 523, 562 Snorkels
544, 49,52,54,56,)
61,63,66,67) Brush Trucks
HM 1 Hazardous Materials Truck
Rescue 1, Rescue 20, etc. Rescue Trucks

That is it for this month. See you next month with more! Good listening!

PUBLIC SAFETY - EAST

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia to : Richard Barnett, P.O. Box 428. Newton Highlands, MA 02161.

NO COLUMN THIS ISSUE

PUBLIC SAFETY - WEST

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming to: George Hoggatt, 17473 E. 16th Drive, Aurora, CO 80011.

Time to do the old column again. Gee, how time flies when you're having fun or something like that.

I have enough input from you the members to make a short column this month, but there isn't much left for the slow summer months. I see several letters in the YOUR THOUGHTS column that say "Keep up the good work." DON'T TELL ME TO KEEP UP THE GOOD WORK!!! Send me information so I can "Keep up the good work"

ENGLEWOOD COLORADO

1. The voters of Englewood have passed a charter ammendment requiring that all Police traffic cars be "prominently marked as police cars."
2. Fire station number 3 will move from 595 W. Bellview to Layton Ave. and Acomma St. on April 16th. The new station will house Pumper 7 and Rescue 2. There are two dormatories. One for men and one for women if and when any are hired. The service area is: Lowell St. on the west; Clarkson St. on the east; Oxford Ave. on the north; Bellview on the south plus a small area south of Bellview and west of Broadway where the K-Mart store is.

AURORA COLORADO

Aurora has a new Fire Department publication for the public. It is called the AURORA FIRE SIREN, and is published quarterly. Volume 1 number 1 is dated winter 1981. I got my copy at the library (free). It has some interesting data about the department. I would use some of it here but it appears to be copyrighted.

EL PASO COUNTY COLORADO

Dave Rains (CO-010) has sent in a long list of frequencies for the El Paso County/Colorado Springs area.

LICENSEE	BASE	MOBILE	TYPE	REMARKS
Colorado Spgs.	460.625	465.625	PF RP	Ch. 1 dispatch
	460.525	465.525	PF RP	Ch. 2 backup, Fire Marshals, rescue
	453.750	458.750	PP RP	Ch. 1 Eastside dispatch
	453.850	458.850	PP RP	Ch. 2 Westside dispatch
	453.350	458.350	PP RP	Ch. 3 Detectives, SWAT, info, car-to-car
	453.300	458.300	PP RP	Ch. 4 Detectives, SWAT, info, car-to-car
	453.300	453.300	PP BM	Ch. 5 Detectives, SWAT, car-car
NOTE:	Channels 4 and 5 are using DVP (Digital Voice Protection) on occasion			
	155,010	155.010	PP BM	City Marshals, police paging

	155.925	155.925	PL BM	Park Police and others
	453.975	458.975	PL RP	Pikes Peak Toll Road Patrol
Fountain	154.100	154.100	PL BM	Fire Dispatch
	453.650	458.650	PP RP	Police Dispatch
Manitou Spgs.	155.100	155.100	PL BM	Fire Dispatch
	155.535	155.010?	PP RP	Police Dispatch voice inversion scrambling used on occasion.
El Paso County	155.235	155.235	PS BM	Search and rescue
	155.610	155.490	PP RP	Ch. 1 Sheriff dispatch
	154.860	154.960	PP BM	Ch. 2 Sheriff
	155.655	?	?	District Attorney (not listed)
	155.160	155.160	PS BM	Sheriff's Posse
Penrose Hospital	155.295	155.295	PS BM	Security
El Paso County	154.055	154.055	PL BM	Humane Society of Pikes Peak - the area dog catcher
	45.200	45.200	PL BM	Colorado Mounted Rangers
	154.325	154.890	PF RP	County Fire Net

Pikes Peak Radio System - El Paso County Fire Net - unit numbers

100-199	Security FPD	200-299	Colorado State Forest Service
300-399	U.S. Forest Service*	400-499	Stratmoor Hills FPD
500-599	Tri-Lakes F.D.*	600-699	Broadmoor FPD
700-799	Black Forest FPD	800-899	Green Mtn. Falls/Chipeta Park FPD
900-999	Ivywild-Cheyenne Can.FPD	1000-1099	Manitou Spgs FD
1100-1199	Fountain FD	1200-1299	Colorado Spgs. FD
1300-1399	Cimarron Hills FPD	1400-1499	Calahan VFD
1600-1699	Woodman Valley FD	1800-1899	Cascade FPD
1900-1999	Stratton Meadows FPD	2500-2599	MAST Helicopters*
2600-2699	Air Force Academy FD*	2700-2799	Peterson AFB*
2800-2899	Ft. Carson (Army)*	2900-2999	El Paso County Search & Rescue
3000-3099	El Paso Co. Fire Marshal	3100-3199	County Station 1
3200-3299	County station 2	3300-3399	Ellicot VFD

Most of the departments listed have their own frequencies. The unit numbers are used on both frequencies. Others using this net (numbers unknown) are: Rush VFD, Falcon VFD, Peyton VFD, Hanover VFD.

To go along with this, Donald Bishop (CO-002) has sent along the codes for the El Paso County Sheriff/Colorado Spgs. PD and the Pueblo County Sheriff:

COLORADO SPGS. PD - EL PASO COUNTY SHERIFF'S RADIO CODES

10-1	Receiving poorly	10-51	Shoplifter, adult or juvenile
10-2	Receiving well	10-52	Lost child or person
10-3	Coffee, etc.	10-53	Bomb threat
10-4	OK	10-54	Have car stopped, may be dangerous, give license and location
10-5	Relay		
10-6	Busy	10-55	Request ambulance
10-7	Out of service	10-56	Pick up animal
10-8	In service	10-57	Investigate a dead body
10-9	Repeat	10-58	Message delivered
10-10	Out of service, subject	10-59	Attention all cars
10-11	Dispatching too rapidly	10-60	Request wagon or bubble unit
10-12	Officials or visitors present	10-61	Burglar alamr
10-13	Advise weather, road conditions	10-62	Rape
10-14	Escort	10-63	Fire
10-15	Prisoner in custody	10-64	Meet the officer
10-16	Pick up prisoner at _____	10-65	Contact the citizen
10-17	Pick up papers at _____	10-66	Cancel
10-18	Complete present assignment as soon as possible	10-67	Assault
		10-68	Narcotics complaint
10-19	Return to your station	10-69	Child abuse
10-20	What is your location?	10-70	Obtain report
10-21	Call _____ by telephone	10-71	Shooting
10-22	Disregard last information	10-72	Place a road block at _____
10-23	Stand by	10-73	Burglary

10-24 Trouble at station. All units report to _____
10-25 Unfounded
10-26 Can you obtain auto registration from _____
10-27 Mischievous mischief
10-28 Check for full registration
10-29 Check for wanted
10-30 Drunk
10-31 Fight
10-32 Disturbance (Bar, Street, Etc.)
10-33 Disturbance (family only)
10-34 Civil disturbance, riot
10-35 Miscellaneous, explain
10-36 Correct time
10-37 Verbal warning
10-38 Change channel to # _____
10-39 Warrent or summons service
10-40 Issuing traffic citation
10-41 Hit and run accident
10-42 Officer #___ no at his home
10-43 Obtain cold accident report
10-44 Auto accident, no injuries
10-45 Auto accident, injuries
10-46 Request wrecker
10-47 Drunken driver
10-48 Speeder, reckless driver
10-49 Cover traffic at _____
10-50 Use caution
10-74 Armed robbery
10-75 Stolen car
10-76 Suspicious car or person(s)
10-77 Abandoned vehicle
10-78 Parking complaint
10-79 All officers stand by for emergency duty
10-80 Tower lights ok
10-81 Officer _____ now at HQ
10-82 Ambulance investigation
10-83 Money escort
10-84 Resusciatior call
10-85 Request coroner
10-86 Officer left this station for ___
10-87 Obtain dog bite report
10-88 Dog complaint
10-89 Suicide
10-90 Cover in on call with car ___
10-91 Dead animal
10-92 Checking or securing business
10-93 Open door or window
10-94 Investigate suspicious place or circumstance
10-95 Prowler
10-96 Stray stock
10-97 Arrived at scene
10-98 Completed last assignment
10-99 Homicide
10-100 Emergency call, red lights & siren

PUEBLO COUNTY SHERIFF'S RADIO CODES

Code 1 Arrived
Code 2 Quickly
Code 3 Emergency
Code 4 Prisoner
Code 5 Caution
Code 6 Juvenile
Code 7 Out of service
Code 8 In service
Code 9 Return
Code 10 Officer in trouble
Code 11 Distegard
Code 12 Accident
Code 13 Disturbance
Code 14 Coroner call
Code 15 Meet with _____

MULTNOMAH COUNTY (PORTLAND) OREGON

The following was sent by a member from Portland. I cannot tell you who as the member did not include a member number and the signature is like mine, unreadable. When submitting information, print or type your name and member number on every sheet. That way when it enters my "pull it out and shuffle" filing system, you can still get credit.

The countywide EMS system went into operation in Multnomah County (Portland) in early December 1980. This was marked by minimal news coverage and great discord. The Portland Fire Bureau was indifferent (at the time). Multnomah Co. Dist. 10 wanted no part of it and the ambulance companies protested the loss of control of thier own dispatch functions. Personnel were hired to man the EMS dispatch at the Kelly Butte Police Dispatch Center. (These people were described to me as "CETA" types who were given two months training and handed mikes.) A seperate telephone number is used to summon EMS service presently, but will be incorporated into the 911 system when it is implemented in late 1981. 462.950 is the dispatch frequency.

For the first month the ambulance companies continued to dispatch their own cars, the units merely advising EMS dispatch of their status. In January, the EMS ordinance was enforced, requiring the ambulance companies to allow EMS to handle all dispatch functions. In early February one company was slapped with a permanent court injunction, requiring them to comply with the ordinance, after they admitted receiving a call and then calling one of their own units, then another company (which they believed to have a unit nearby), instead of immediately calling EMS. Also about this time the Portland Fire Bureau started talking about pulling out of the system, supposedly because of complaints from the public of private ambulances beig sent on calls that a PFB rescue unit would have previously handled.

On February 24, another public hearing was held, the discussion limited almost entirely to the alleged "gross incompetence" of the EMS dispatchers.

All ambulance-to-hospital traffic is still conducted on the HEARS net, 155.340. As far as I know, the only hospital set up so far on the UHF MED channels is the University of Oregon Medical School, who have had MED-4, 5, 6 for some time now. When ambulance-to-hospital traffic will shift to the MED channels is unknown. Nor is the date when Clackamas Co. will implement their EMS system known, but it is believed to be imminent. Maybe it will run smoother than Multnomah County's.

Basic unit numbering system is as follows (roughly):
50's Buck ambulance, 60's Care/American (except 66 is Buck), 70's Care, 80's Care, 90's AA, 100's AA, Rescue 1, 2, 3 PFB, Rescue 8, 9, 10 District 10.

Ed. note - EMS is for Emergency Medical System, CETA is for Comprehensive Employment and Training Act.

COWLITZ COUNTY WASHINGTON

The same unidentifiable member sent the following change to the Cowlitz County sheriff's repeater. The output frequency has changed from 154.950 to 155.370. The input remains the same. Cowlitz County is adjacent to the county where Mt. St. Hellens is.

NEW MEXICO STATE POLICE

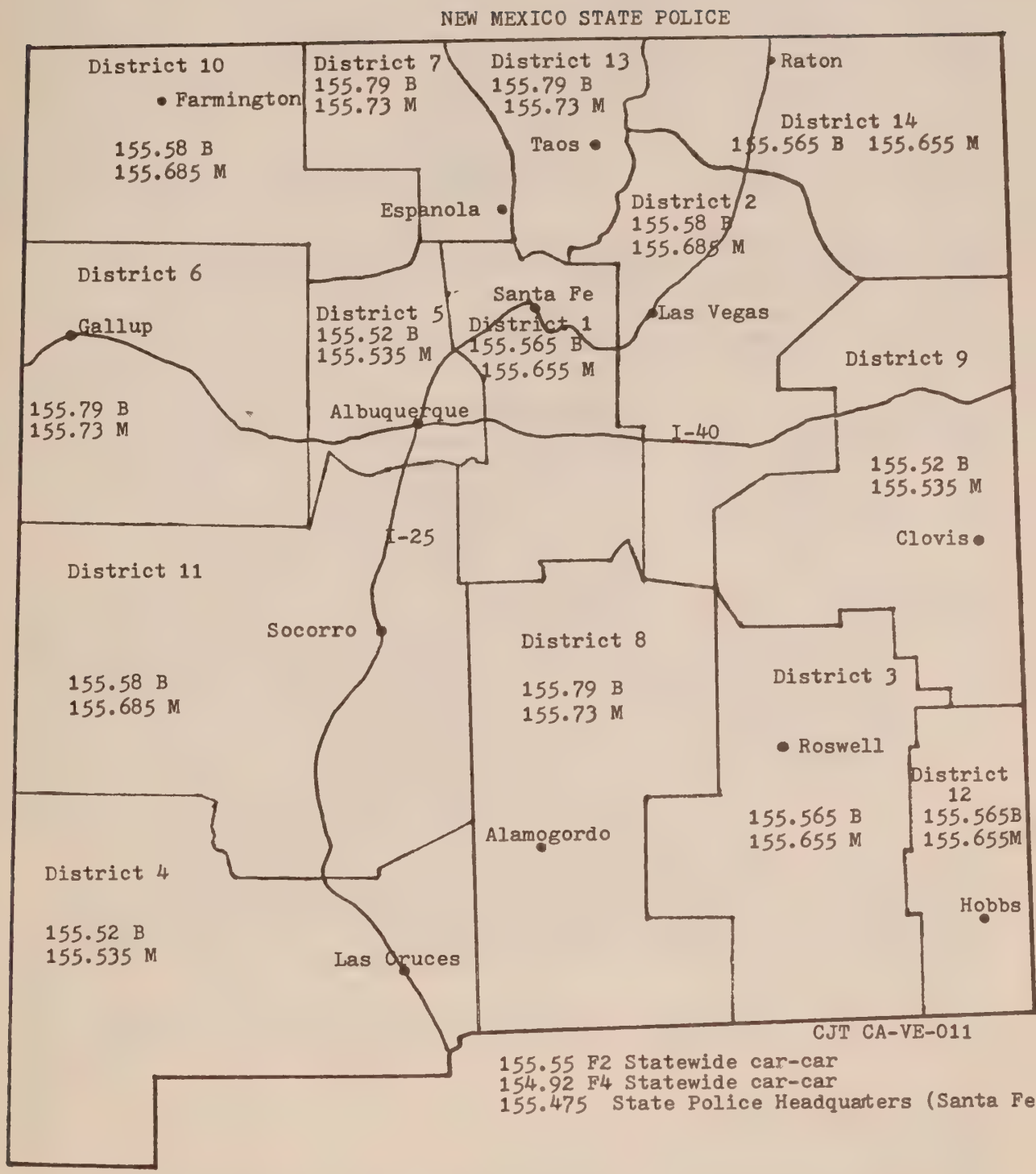
I have a problem. In April, I presented some information from Fred Richter (NM-005) This included frequencies for four New Mexico State Police districts. Last month I had a list of the frequencies for Districts 1 to 11 from Jerry Stevens (NM-004). Jerry also included a sketch map of the District boundries. I did not include it as there was not time to turn the sketch into a reproducable map. This month I have another map of the District boundries, from Craig Thompson (CA-VE-011). This map differs from the information from Jerry last month:

The frequencies for Districts 2 (mobile only), 7 and 10 are different. However the District 10 frequencies match those reported by Fred in April.

The boundry between districts 5 and 7 are different.

The new map has three new districts: 12, 13 and 14 that are not on Jerry's map or on his list.

HELP can anyone confirm which is correct? My supposition is that there was a change between the time Jerry received his information and the time that Craig received his. But that is only a guess.


NEW MEXICO STATE POLICE
District 10
Farmington
155.58 B
155.685 M
District 7
155.79 B
155.73 M
District 13
155.79 B
155.73 M
Raton
District 14
155.565 B 155.655 M
Taos
Espanola
District 2
155.58 B
155.685 M
District 6
Gallup
155.79 B
155.73 M
District 5
155.52 B
155.535 M
Santa Fe
District 1
155.565 B
155.655 M
Las Vegas
District 9
Albuquerque
I-40
155.52 B
155.535 M
I-25
Clovis
District 11
155.58 B
155.685 M
Socorro
District 8
155.79 B
155.73 M
District 3
Roswell
District 12
155.565 B
155.655 M
155.565B
155.655M
Alamogordo
District 4
155.52 B
155.535 M
Las Cruces
Hobbs
CJT CA-VE-011
155.55 F2 Statewide car-car
154.92 F4 Statewide car-car
155.475 State Police Headquaters (Santa Fe

Send Public Safety and Special Emergency frequencies, radio system details, and questions for California to: Eric Christensen (CA–LA–045), 3146 W. Ball Road, Apt. 35, Anaheim, CA 92804.

From RON (CA-VE-013):

FIRE DEPARTMENT-County of Ventura
Radio System & Battalion Assignment

Freq. 1	154.010 MHz.	DISPATCH
Freq. 2	154.325	Channel Two
Freq. 3	154.370	Oxnard & Ventura City Fire Departments
Freq. 4	154.400	Los Angeles County Fire "ANTELOPE"
Freq. 5	154.280	State Fire Mutual Aid

Transmitter Locations:

Local..... KDT971	South Mountain..... KMB552
Red Mountain..... KRC739	South Coast..... KQS567

Recently, the Ventura County Fire Department realigned a few of its stations into different battalions. Along with this, the station numbers for three of the stations were changed as follows:

Station 13	Piru	now Station 48
Station 11	Fillmore	now Station 47
Station 14	Summit	now Station 20

BATTALION TWO

Station 20	Summit
21	Ojai
22	Meiners Oaks
23	Oakview
24	Ventura
25	Rincon

BATTALION THREE

Station 30	Thousand Oaks
31	Westlake
32	Newbury Park
33	Lake Sherwood
34	Thousand Oaks
35	Newbury Park

BATTALION FOUR

Station 41	Simi Valley
42	Moorpark
43	Santa Susan Knolls
45	Simi Valley
46	Simi Valley
47	Fillmore
48	Piru

BATTALION FIVE

Station 12	Santa Paula
15	Saticoy
50	Camarillo Airport
51	Oxnard
53	Port Hueneme
54	Camarillo
55	Camarillo Heights
56	Malibu
OES 79	Camarillo State Hospital

Ventura County recently completed the overhaul of another surplus helicopter, giving the County four available helicopters and one small airplane. The helicopters are surplus Huey UH-18, modified to the Bell 204A version. They are numbered "3", "4" and "5". Helicopter "2" is a Bell 47. They area jointly owned and operated by the Sheriff and Fire Departments.

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From ERIC (CA-LA-045):

Due to some minor difficulties, the annual PS-California index will be postponed until the July, 1981 issue. Thank you for your patience. EJC

From ERIC (CA-LA-045):

SHERIFF'S DEPARTMENT-County of Los Angeles
Radio System

The Los Angeles County Sheriff's Department patrols a major portion of Los Angeles County, serving a majority of the population in unincorporated

areas and contract cities of Los Angeles County. To do this, the Sheriff's Department's patrol responsibilities are broken down into several areas requiring eighteen substations to serve the public! The L.A.S.O. also maintains a substation on Catalina Island off the Pacific Coast approximately 25+ miles. The L.A.S.O. is also responsible for maintaining the L.A. County Central Jail, Sybil Brand Institute for Women, and the Wayside Honor Ranch. The Department employees approximately 6,000 sworn personnel, plus administrative and support personnel.

Station Numbering-Los Angeles Sheriff

1.	Firestone	8.	San Dimas	15.	Pico Rivera
2.	East Los Angeles	9.	West Hollywood	16.	Carson
3.	Lennox	10.	Malibu	17.	Lomita
4.	Norwalk	11.	Antelope Valley	18.	Avalon
5.	Temple City	12.	Crescenta Valley		
6.	Santa Clarita	13.	Lakewood		
7.	Altadena	14.	Industry	25.	Lynwood

Patrol Unit Numbering-Los Angeles Sheriff

A. The first one or two digits of the Unit's unit number indicate which station the unit is assigned to (see above).
B. The last digit indicates the specific "beat" assignment that the car is assigned to.
C. Optional letter designations:

"K"	Generally a two man car	"C"	Captain	"X"	Vans or as assigned
"A"	Second car in an area	"L"	Lieutenant	"M"	Motorcycle
"T"	Traffic	"S"	Sergeant	"E"	Prisoner van

"D" Station desk (when used after 10, 20, 30, 40 thru 250)
"D" Report writing unit (when used after standard unit number series, 51D, etc.)

Radio Frequency System-Los Angeles Sheriff

The Los Angeles Sheriff's Department Radio System utilizes 10 dispatch frequency pairs (numbered frequencies); 10 simplex VHF-Low Band frequencies for car to car, tactical, administration, etc. and 10 UHF frequencies for detectives and various other uses, (including experimental use tests for patrol purposes). All patrol dispatch frequencies are VHF-Low Band in the 39 MHz. spectrum. Dispatch channels are of the Base/Mobile operation. All dispatching is done by the S.R.C. (Sheriff's Radio Center) in East Los Angeles. Dispatch channels # 11, 12, 13, 14 and 15 are designated for "East Patrol Division" assignments; and channels # 21, 22, 23, 24 and 25 are designated for "West Patrol Division" assignments. The East Los Angeles station is considered basically to be at the Division boundary line. This is mainly why the S.R.C. was placed in East Los Angeles.

	STATION LOCATION	STATION #	CHANNEL #	BASE FREQ.	MOBILE FREQ.
EAST PATROL DIVISION	San Dimas	8	11	39.94 MHz	39.46 MHz.
	Industry	14	11		
	Lakewood	13	12	39.64 MHz.	39.22 MHz.
	Norwalk	4	13	39.88 MHz.	39.42 MHz.
	Pico Rivera	15	13		
	East Los Angeles	2	14	39.76 MHz.	39.30 MHz.
	Temple City	5	15	39.82 MHz.	39.34 MHz.
	Altadena	7	15		
	Crescenta Valley	12	15		

WEST PATROL DIVISION	Carson	16	21	39.20 MHz.	39.66 MHz.
	Lomita	17	21		
	Firestone	1	22	39.44 MHz.	39.78 MHz.
	Lynwood	25	22		
	Lennox	3	23	39.14 MHz.	39.84 MHz.
	West Hollywood	9	23		
	Malibu	10	24	39.02 MHz.	39.74 MHz.
	Santa Clarita Valley	6	25	39.08 MHz.	39.66 MHz.
	Antelope Valley	11	25		

TACTICAL SIMPLEX FREQUENCIES

General Frequency Usage	Channel Designation	Frequency
Administrative	Frequency "A" ADAM	39.36 MHz.
Car to car	"C" CHARLIE	39.48
Detectives (Hall of Justice)	"D" DAVID	39.24
East Patrol Division Information/Tactical	"E" EDWARD	39.72
Car to car and/or helicopter to car	"H" HENRY	39.60
Command post and rescue (used by Aero Bureau)	"M" MARY	39.52
Surveillance	"S" SAM	39.70
West Patrol Division Information/Tactical	"W" WILLIAM	39.32
Jail Security		39.38
Field to car	"P-1"	39.40
Field to field	"P-2"	39.26
Wayside Honor Farm (Castaic)		460.175 R
" " " "		39.38
Prisoner Transportation buses	California Highway Patrol	42.34 B)
(LASO buses have CHP Blue Channel capabilities)	"BLUE"	42.18 M)

The main call sign used for all communications on 39 MHz. channels by S.R.C. (Sheriff's Radio Center) for dispatching purposes, etc. is: KMA 628. NOTE: Approximately, every one half hour, on the quarter and three quarter hour, a tape recorded identifier activates as follows: "L.A. Sheriff, KMA 628". Avalon Island identifies on Frequency 26 as KCR 920. Frequency 25 is identified as KMA 629 in the Santa Clarita and Antelope Valley areas. All substations have individual base station transmitters, and therefore, separate F.C.C. call signs. Primary control of all frequencies is with the S.R.C. Individual substations may request a certain simplex frequency be "restricted" for exclusive use by that station. Usually, the first channel released to an individual station would be Frequency "CHARLIE" (39.48 MHz.) Frequency CHARLIE is also sometimes referred to as "Frequency One", dating back to the days when the L.A.S.O. had only EIGHT operating frequencies! (Could you immagine what it must have been like then, and if the L.A.S.O. had to operate with only eight frequencies NOW?! (There were up to FIVE substatinns on ONE frequency!! Talk about heavy radio traffic! Now back to what I was talking about before: If another substation needs a frequency restricted exclusively for their use, Frequency "HENRY" is second in line. (39.60 MHz.) If things really went crazy, Frequencies "EDWARD" (39.72 MHz.) and Frequency "WILLIAM" (39.32 MHz.) would be just about all there is left. If there was continued or increased need, frequencies would have to be shared on a "severity" and "geographical" basis. Final decisions would be made by the Watch Commander at the S.R.C.; generally this being a sergeant.

In a situation where two or more units may be responding to a "heavy call", such as an armed robbery (211 PC NOW), or a silent alarm (211 S-robbery or 459S-burglary), etc., the deputies may request the radio operator at the S.R.C. to activate the "Patch". The "Patch" is nothing more than having the R.T.O. (Radio Telephone Operator or dispatcher) to place the duplex base/mobile frequency into a "repeat" mode. In this mode, all mobile transmissions over that particular dispatch channel, are repeated over the dispatcher's base frequency, allowing the mobiles to hear each other and to talk to

eachother without having to switch to a car to car channel. In the normal mode, cars can NOT hear each other on the dispatch channel. To prevent another unit from covering or "walking on top of" another unit, a "beep" tone is heard over the dispatch channel whenever a unit is talking to the dispatcher. This is an automatic feature, and the "beep" is heard whenever a microphone is keyed in any mobile unit on the dispatch frequency. The patch is strictly dispatcher controlled, with S.R.C. supervision usually involved. In most cases, the individual sheriff substation's dispatch deputies monitor and may be communicating with units in the patch mode, or more generally, on Frequency CHARLIE or Frequency HENRY. Most substations usually operate on one or the other frequency, in order to minimize interference with other stations and mobiles.

UHF RADIO SYSTEM

Channel #	Frequency	Assignment/Usage	Area
1	470.6875 MHz.	Patrol Tactical Channel	Countywide
2	470.9375	Detectives	Countywide
3	470.7375	Detectives	L.A. Basin
4	470.7625	Simplex-Car to Car	Simplex
5	470.8375		Southwest County
6	470.8625		East County
7	470.8875	Dispatch	Lakewood Station # 13
8	470.9125		East County
9	470.7875	SRC Access only-Paging & Emergency	Countywide
10	470.8125		Antelope & Santa Clarita

NOTE: All mobile communications (except simplex operation) is 3.00 MHz. higher in frequency, ie: Freq. 1 470.6875 B/473.6875 M.
UHF use by Lakewood station # 13 has been discontinued, and Freq. 12 (39.64 MHz. B/39.22 MHz. M) is now being used again. There is currently no patrol use of the 470 system at this time, apparently due to unfavorable experiences by Lakewood station # 13.
Some reports indicate that the L.A.S.O. may be considering disposing of the 470 system entirely. Further reports regarding the 470 system will be made available to the membership as they become available to this editor.
Most patrol cars have a small VHF-High band antenna on top of the light bar. This is for the "extender", which repeats the 39 MHz. car radio over VHF-High band to a hand held radio carried by the deputy sheriff when he is out of his vehicle. The unit also repeats over the 39 MHz. car radio anything transmitted over the extender hand held radio. Reports indicate that this system may be discontinued in the future, if it has not been already. Extender frequency: 154.80 MHz. Simplex

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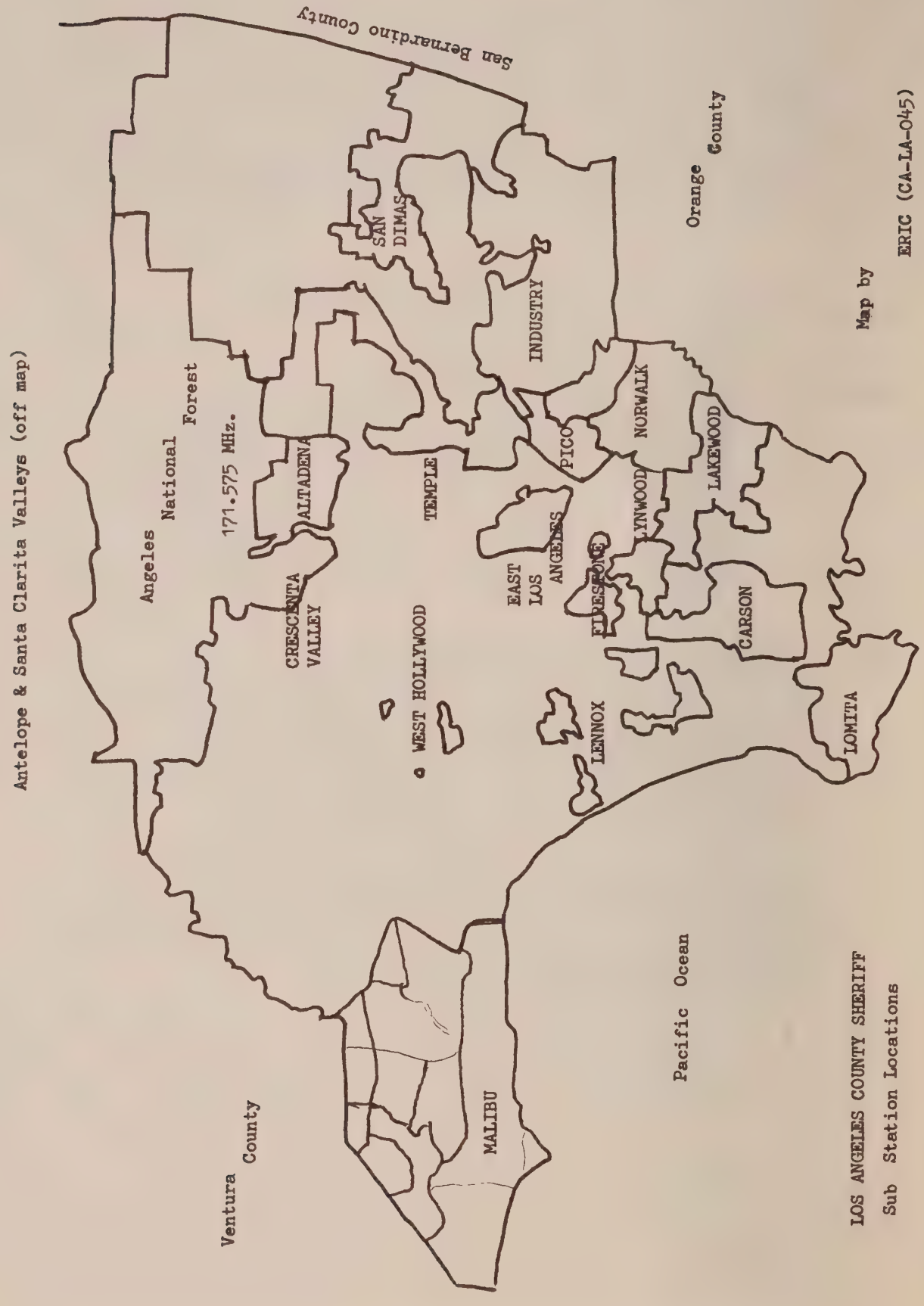
To be continued.....


Antelope & Santa Clarita Valleys (off map)
San Bernardino County
Angeles National Forest
171.575 MHz.
SAN DIMAS
INDUSTRY
Orange County
ALTADENA
TEMPLE
PICO
NORWALK
LAKEWOOD
LYNWOOD
EAST LOS ANGELES
FIRESTONE
CRESCENTA VALLEY
WEST HOLLYWOOD
CARSON
LENNOX
LOMITA
MALIBU
Ventura County
Pacific Ocean
LOS ANGELES COUNTY SHERIFF
Sub Station Locations
Map by
ERIC (CA-LA-045)

From ERIC (CA-LA-045):

SPECIAL BULLETIN:

The 1981 POLICE CALL Directories are finally available! The Southern California Detail Edition is priced at $6.50 and Volumes 1 through 9 are priced at $6.95 each. They are available through the publisher and several "SCANNER STORES"

Publisher: Hollins Radio Data, Police Call, Dept. 1, Lebanon, N.J. 08833

Include postage: 40¢ for 4th class mail; $1.50 for 1st class mail for EACH COPY.

Also available at most Radio Shack stores. (Generally only volumes 1 thru 9 only)

Also available at Dow Radio, 1759 E. Colorado Blvd., Pasadena, California. (NO MAIL ORDER SALES) Southern California Detail & Volume 9 editions only.

Also available at Communications Center of Anaheim, 915 N. Euclid, Anaheim California, 92801. (Over the counter & mail order) All editions-Volumes 1 through 9 and Southern California Detail available.) Add postage.

Also available at Henry Radio, 931 N. Euclid, Anaheim CA. Southern California Detail edition only. (Over the counter sales only)

Also available at Henry Radio, 2050 S. Bundy, West Los Angeles. Southern California Detail edition only. (Over the counter sales only)

Southern California Detail edition contains police, fire, emergency services, etc. for the Southern California counties of Los Angeles, Orange, Ventura, San Bernardino, San Diego, and Riverside counties only.

Volume 1 covers Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont.

Volume 2 covers Delaware, Maryland, New Jersey, and Pennsylvania.

Volume 3 covers Michigan and Ohio only.

Volume 4 covers Illinois, Indiana, Kentucky, and Wisconsin.

Volume 5 covers Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

Volume 6 covers the District of Columbia, Florida, Georgia, North Carolina. South Carolina, Virginia, and West Virginia.

Volume 7 covers Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Texas, and Tennessee.

Volume 8 covers Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, and Wyoming.

Volume 9 covers California, Oregon, and Washington.

NOTICE: The above information was included by the PS-California editor due to the large number of inquiries regarding how to obtain frequency information in various areas. These books are put out each year approximately during March or April. I hope the above information has helped some of the membership in obtaining frequencies in their area, and also frequency information for use while receiving "skip" radio transmissions.

NOTICE: Due to a printing error in the 1981 Southern California Detail Edition of Police Call, numerous listings between "R" and "V" were omitted in the Los Angeles County "Local" heading. The publisher is aware of this problem, and he has advised us that a supplemental page, etc. will be forthcoming. That information will be made available to purchasers & will be published in RCMA.

International

Richard Stein, Editor

This column is for reporting two—way communications frequencies above 30 MHz, radio system details, monitoring experiences, and any other information relating to monitoring in countries other than the United States and Canada. Send to:. Richard Stein, 456 Barrymore Place, North Brunswick, NJ 08902.

SKIP-SATELLITE-OR IMAGINATION?

Here are some thoughts in response to Robert's (MD-029) comments and questions in the April Newsletter (Miscellany, page9). 33.900 MHz signals at 36.900 MHz have been reported earlier in this column, the Low-Band Skip column, and in various earlier Newsletters.This phenomenon, as well as the appearance of these signals at about 44 MHz, is most likely explained by a series of skip signals

It's my feeling that signals, originating at least on a frequency of 33.900 MHz, from many parts of the U.S. are keying a foreign repeater system(s). After mixing with these foreign signals, the resultant output at 36.900MHz then skips back to the U.S. This two way skip has already been seen on a number of low band frequencies. The most persistant combination, that is, those which have been received on the East Coast on a daily basis for more than 10 years involve a possible input of 39.460 MHz and output of 41.620 MHz, and a confirmed input of 44.940 MHz with output of 40.460 MHz. The signals are traveling a north-south path, keying some repeater system(s) in South America- most probably locations in Columbia and/or Venezuela.

There is still a good deal of unknown because of the tremendous lack of information on any foreign repeater systems. Information has to be pieced together from the parts of conversations received by skip. These particular systems involve both English and Spanish.

Let's examine these two systems first since they are similar. Both sets of signals involve a South American oil drilling company whose base id's as "Santomé". This name is probably either an acronym or a company abbreviation since Spanish sytax demands that the form should be Santo Tomé.

"Santomé" has been heard working the following bases (oil rigs?):

"CASO" 1,13,14 "FLINCO(PLINCO)" 9,11,35,118
"HOUSTON" "LUFLIN(LOUGHLIN)"
"PRODO" 39,69 "SANTA FE" 15
"S-P-A (Ese-pey-ah)" 10

Most messages are in Spanish or American accented Spanish.English is rarely used and this usually has a "Texas" or "SW" accent. Message content deals with production numbers, flow rates, quantities of fresh and salt water, sand, pipe, and other engineering details. An occasional phone patch is heard. Patchs to: La Guaira (Venezuela), Onaco, and the Canama (not Canaima-this is located in Venezuela) Hotel have been heard.

The difficulty in identifying the probable inputs arises from the fact that the systems are keyed by various State Police agencies, each of

which uses a number of low-band frequencies- all id'ing with the same call. An examination of the calls heard and a comparison of the associated frequencies leads to a common low-band frequency which we have assumed to be the most likely input to the repeater system. Here are the details of each system:

input		output
39.460		41.620
KJE 260	Kansas State Police	Chanute, Garnett, Girard Hamilton, Independence
KQB 356	Ohio State Police	Findlay
44.940		40.460
KJE 260	Kansas State Police	Chanute, Garnett,Girard, Hamilton, Independence
KQB 356	Ohio State Police	Findlay
KQB 360	Ohio State Police	Franklin County
KQB 381	Ohio State Police	Van Wert
KCA 999	New Hampshire S.P.	Mt. Kearsarge,Pitcher Mountain
(no call heard)	New Jersey S.P.	Red Lion Base

The key to this set involves the NJ SP base id'ing as Red Lion Base. This base uses only 44.940 on low band.

The situation with the 33.900/36.900 pair is more clouded. I have heard the following on 33.900 :

KXQ-736	Nashville TN Fire	listed as 33.900 & 33.640
"451"	unknown	
"Pelican Bay Fire"	unknown	
Russian	similar to signals received on 34.525	
Russian	a female with a strong Ukranian accent	
2 different "British West Indies (Biwi) English" bases		

on 36.900:

KQA 216	Cleveland OH Fire	listed on 33.460,33.580 33.720 & 33.900
KQI 316	Hamilton Co.OH Fire	33.900
KCA 585	Plymouth MA Fire	33.700 & 33.900
"Dayton Ohio" unknown		
"Tilton Fire" possibly MA- unk frequency		
Biwi English bases- business, both sides of transmissions and no repeater		
Spanish language base		
Portuguese language base (same signal heard on 40.140)		

In this case a number of frequencies are involved. It is not as clear cut as with the other two pairs. This may possibly involve more than one repeater system. This would then explain their appearance at about 44 MHz too! With more information, perhaps we can piece together a bit more of the picture. Why not send me any information you might have on these pairs of frequencies and I'll report the results in a future column.

In next month's column, I will have some information concerning some strange programing abilities of the BC 220FB- things that Bearcat doesn't tell you. Until next month.... שלום

NEW MEMBERS LIST

AL 016 HARDIN, MICHAEL E;421 3RD AVENUE NE;FAYETTE, AL 35555
CAAL032 HIGGINS, HOWARD L;1044 REDONDO WAY;LIVERMORE, CA 94550
CAAL033 RUDERICK, AUGUSTINE;27871 ANDREA ST;HAYWARD, CA 94544
CAAL034 SKIVERS, DARRYL C;836 RESUTA ST;HAYWARD, CA 94544
CAGL002 JENSEN, CARL E;PO BOX 282;WILLOWS, CA 95988
CAKE010 THOMAS, A.M.;6101 PHILLIPS RD;STAR RT N 2
MOJAVE, CA 93501
CALA386 DUMAS, MICHAEL;3450 MARNA AVE;LONG BEACH, CA 90808
CALA387 DUNLAP, MICKEY;524 N BRAND BLVD;GLENDALE, CA 91203
CALA388 GOODALE, ROBERT T.F.;11712 KIOWA AVE 8
LOS ANGELES, CA 90049
CALA389 ARTHUR;BELLFLOWER, CA 90706
CALA390 LANNON, ROBERT;239 E 46TH ST;LONG BEACH, CA 90807
CALA391 THOMAS;LOS ANGELES, CA 90041
CALA392 SHALLON, S.C.;11058 QUEENSLAND ST;LOS ANGELES, CA 90034
CALA393 VAAGE, CAPT BJORN F;17220 TULSA ST
GRANADA HILLS, CA 91344
CALA394 DON;PARAMOUNT, CA 90723
CALA395 ROGER;TORRANCE, CA 90505
CAMR003 SEVIER, A.L.;1611 W 16TH ST;MERCED, CA 95340
CAOR187 KIN SALES CO;PO BOX 2167;HUNTINGTON BEACH, CA 92647
CAOR188 CHEATHAM, DANIEL T;8434 PERIWINKLE DR
BUENA PARK, CA 90620
CAOR189 SAUNDERS, JIM;828 S HELENA;ANAHEIM, CA 92805
CAOR190 ROACH, SKIP;13172 JEFFERSON;GARDEN GROVE, CA 92644
CAOR191 ANNE;ORANGE, CA 92667
CAOR192 MURDKIN, A.P.;8904 BOLSA AVE;WESTMINSTER, CA 92683
CARI033 KIDSTON, A.H.;2417 NORCO DRIVE;NORCO, CA 91760
CARI034 MARTY, FRANK;321 LOGENITA;PALM SPRINGS, CA 92262
CASB037 PUH, PAULA J;618 W CORNELL;RIALTO, CA 92376
CASD038 MORELAND, FRANCIS O JR;3748 YOSEMITE ST
SAN DIEGO, CA 92109
CASF021 JONES, DONALD SR;1209 BRODERICK ST
SAN FRANCISCO, CA 94115
CASJ006 ANGSTEAD, HAROLD;1706 MARIPOSA WAY;LODI, CA 95240
CO 028 KALISCH, PAUL;11995 E YALE WAY;AURORA, CO 80014
CT 045 GUINEY, WILLIAM P;CT 004;PUTNAM GREEN 25A
GREENWICH, CT 06830
CT 046 REED, LAWRENCE H;5 OAK RIDGE PARK;WESTPORT, CT 06880
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FL 104 SIEINHOFF, KENNETH L.;620 WILMOT ST
WEST PALM BEACH, FL 33405
FL 105 MAY, DON JR;RT 2 BOX 156-C;QUINCY, FL 32351
FL 106 NUFZIGER, DAVID P;PO BOX 7084;SARASOTA, FL 33578
FL 107 CANN, J. DUANE;1204 JEAN CT;JACKSONVILLE, FL 32207
FL 108 GONZALEZ, SERGIO;305 N W 77 AVE;MIAMI, FL 33126
FL 109 GARY, CHARLES;PO BOX 681;TALLAHASSEE, FL 32302
FL 110 RYAN, OMER E SR;5254 DIVEN DRIVE;JACKSONVILLE, FL 2207
ID 007 CELLARD, BRYAN;BOX 579;MIDDLETON, ID 83044
IL 178 WIRE, H. CHRIS;926 ASH ST;WINNETKA, IL 60093
IL 179 LOWRY, SCOTT W;115 S CHESTNUT DR;STREAMWOOD, IL 60103
IL 180 CLAPP, PAUL A;6180 W BERENICE;CHICAGO, IL 60634
IL 181 ROBBINS, NANCY S;PO BOX 576;CASEYVILLE, IL 62232
IL 182 JOHNSON, PETER O;10 S LA SALLE ST ?1340;CHICAGO, IL 60603
IN 047 FARRELL, LOUINE;8245 BEECH GROVE RD
MARTINSVILLE, IN 46151
IN 048 KROUSER, ALBERT R JR;30328 N MEADOWBROOK LN
ELKHART, IN 46514
IN 049 TRUE, ROBERT;1012 W BETHEL AVE APT 10;MUNCIE, IN 47304
KY 024 CARPENTER;PO BOX 187;LIVENGSTON, KY 40445
KY 025 PRITCHARD, KENNETH W;RT 3 BOX 223;CALVERT CITY, KY 42029
MA 087 SCRUDATO, MARY LOU;904 STAG WAY;OXON HILL, MA 20022
MA 088 ROBERT;N CHELMSFORD, MA 01863
MA 089 GOLDMAN, ALAN V;29 GARDEN ST APT 110;CAMBRIDGE, MA 02138
MA 090 DONAHUE, WILLIAM F;125 COLLUMBUS AVE;SALEM, MA 01970
MD 046 CAPLAN, KENNETH G;11300 FARMLAND DRIVE
ROCKVILLE, MD 20852
ME 015 MIRANO, RAFAEL M.;AVE HIPODROMO ?20;TIJUANA, MEXICO
MI 079 CHOJNOWSKI, STEPHEN J. JR;1420 12TH STREET
WYANDOTTE, MI 48192
MI 080 GUTIS, EVVET;527 LIARD LAKE RD;HALE, MI 48739
MI 081 RATHSBURG, JOHN M;4540 GRAYTON;DETROIT, MI 48224
MI 082 PERKSON A.J.;907 CAPITAL AVE SW;BATTLE CREEK, MI 49015
MI 083 MCEACHERN, WILLIAM J;BOX 281;HARTLAND, MI 48029
MI 084 MENI, BERNARD;RR 1 BOX 16;GWINN, MI 49841
MT 003 BEESON, VERLE R;PSC BOX 2196;MALMSTROM AFB, MT 59402
NB 004 SCHWARZKOPF, K.;BOX 2374;LINCOLN, NB 68502
NJ 107 SCHILLACI, ROBERT R;1913 SILVERTON RD
TOMS RIVER, NJ 08753

```
NJ   108 MORION, MELVIN A;16 DARTMOOR PLACE;VINCETOWN, NJ  08088
NJ   109 DENTON, JOANNE;872 ST GEORGE AVE  ?26B
         WOODBRIDGE, NJ  07095
NJ   110 BRUNO, ROBERT;21 JEROME PLACE;WAYNE, NJ 07470
NJ   111 DELUCCA, FRANK;101 VAKERICH PL;SOUTH PLAINFIELD, NJ  07080
NJ   112 GELBER, RICHARD S;203 MAIN ST,PO BOX 541
         HACKENSACK, NJ  07602
NJ   113 ROTELLA, ROBERT F;PO BOX 175M;MORRISTOWN, NJ  07960
NJ   114 WISS, A. IRA;31 ROLLINS TRAIL;HOPATCONG, NJ  07843
NJ   115 SIONIER; ROBERT G.;467 S MAPLE AVE;GLEN ROCK, NJ  07452
NJ   116 WILLIAM;BLOOMFIELD, NJ  07003
NY   164 WRIGHT, SP/4 GEORGE 0991;240TH S S CO BOX 337
         APO NEW YORK, NY  09696
NY   165 PRINTZ, MARK;827 NAPOLEON ST;WOODMERE, NY  11598
NY   166 EDWARDS, DOUGLAS BLAKE;48 WAKEFIELD AVE;BUFFALO, NY  14214
NY   167 KUMOROWSKI, DAVID;67 LINDEN ST;YONKERS, NY  10701
NY   168 EHRLICH, ARTHUR;63 AVE A;NEW YORK, NY  10009
NY   169 LORD, FRANK E SR;PO BOX 181;ATTICA, NY  14011
OH   096 MCKENZIE, FREDERICK;10839 COLERAIN RD
         CINCINNATI, OH  45247
OK   023 COPELAND, H.E.;218 NE 5TH;PRYOR, OK  74361
OR   035 MULLENIX, JAMES;BOX 301;PHILOMATH, OR  97370
PA   128 NEHF, CHAR14 ARROWHEAD TRAIL;MEDIA, PA  19063
PA   129 BAUMAN, DONALD R;649 ELM ST;BALLY, PA  19503
SC   013 COLCOLOUGH, JAMES J JR;266 FOREST TRAIL
         ISLE OF PLALM, SC  29451
TX   085 HART, ROBERT F;4709 43RD ST;LUBBOCK, TX  79414
TX   086 WEST, WM M.;12414 DUMAS;HOUSTON, TX  77034
TX   087 CHESSHER, ROGER;4609 ELLA BLVD;HOUSTON, TX  77018
UT   009 SHAWN, STEPHEN L;4568 KYLE DRIVE;SALT LAKE CITY, UT  84118
WI   038 HUEFERT, ERIC;3626 JANSEN DRIVE N;WEST BEND, WI  53095
WI   039 MILLER, SCOTT W;102 OHIO AVE;MADISON, WI  53704
WV   017 HUGSETT, CARL;4599 HUGHES BR RD;HUNTINGTON, WV  25701
071CANA TUOLE, MEYER;27 ARDMORE RD;TORONTO ONT M5P 1V6 CANADA
072CANA BRADLEY, M.C.;BOX 622;CACHE CREEK;B.C. V0K 1H0 CANADA
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AL......15
AR......12
AZ......31
CA.....801
CO......28
CT......42
DC.......7
DE......10
FL.....104
GA......30
HI.......4
IA......25
ID.......5
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NJ.....119
NM.......5
NV......10
NY.....145
OH......92
OK......19
OR......29
PA.....127
PR.......2
RI.......7
SC......11
SD.......3
TN......19
TX......86
UT.......8
VA......46
VT.......2
WA......24
WI......37
WV......16
WY.......4
ARUB.....1
AUST.....1
BERM.....2
CANA....63
ENGL.....2
ICLD.....1
INDO.....1
MEXI.....2
NIRE.....2
NORW.....1
NZEL.....1
SAAR.....1
SWED.....2
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HOW ABOUT COMING TO ST. CHARLES IN JUNE?

The RCMA Midwest Spring Festival 1981

You are cordially invited to attend the second annual Midwest Spring Festival

Yes, if you enjoyed last year's Spring Festival, saw the Newsletter story and wished you were there, or heard about it from those who were, this is your big chance to be there in person and experience all the excitement and glamour as only the St. Louis Chapter can do it- yes- it's the 1981 edition of the Midwest Spring Festival! Read on for exciting details.....

THE DATE:	Saturday, June 6, 1981
THE TIME:	12:30 PM until 8:30 PM(at the latest)
THE PLACE:	First United Methodist Church, 801 First Capitol Drive Beautiful Downtown St. Charles, Missouri
REGISTRATION:	A five dollar registration fee is required (for rent), payable in advance or at the door (cash preferred at the door). The $5 fee will cover an RCMA member and spouse or guest. The funds will also provide light refreshments (no liquor, please).
HOSTS:	The St. Louis Chapter will host the glorious event.
PROGRAM:	Tentative program attached. If you wish to speak, advise in advance and provide at least 100 handouts.
PARKING:	Parking is provided in the rear of the facility- NOT on First Capitol Drive.
DISPLAYS:	Numerous radio paraphernalia will be on display as well as frequency runs and microfiche.
PRESENTATIONS:	Several of our guest experts will provide visual presentations to augment their lectures. Handouts will be provided.
ACCOMODATIONS:	Several hotels are located within minutes of the facility. Many more are located near St. Louis International Airport, just 10 minutes east, or in the Westport area, 15 minutes southeast.

RCMA MIDWEST SPRING FESTIVAL 1981

AGENDA

(This is tentative. A full scale agenda with each item and speaker will be provided on Festival day.)

Here is just a sampling of the topics to be covered:

Missouri State Patrol Radio Network (by M. Redman)

Illinois State Patrol Radio Network (by J. Arendt)

Mobile Data Communications (a slide show from Motorola)

Questions and Answers (noted columnist Dave Crowley)

Governmental Monitoring (Hopefully by John Coker)

St. Louis County's Mobile Communications Van (M. Redman)

Hospitality Period (refreshments, intermingling of guests, comparison of notes, etc.)

Microfiche and Monitoring (Jay Pieper)

Marine Monitoring (Frank Roth)

and lots more surprises (some of which I don't even know about yet)

Group Photos will be taken for the Newsletter

Casette recording encouraged

Have anything to swap? We may have time for a swap period.

Those who make it through the afternoon of excitement may stay after the cleanup (if you help) and visit the monitoring post of Mike Redman.

And if any of you would like to speak on a topic of interest to all, just let me know.

For further information, contact:

Mike Redman (MO-002)
PO Box 1177
St. Charles, MO 63301
314-946-4331

RCMA MIDWEST SPRING FESTIVAL
June 6, 1981

FREQUENCIES OF INTEREST

St. Charles County
Police WCH766/KXZ736

1. 155.490 Rptr./156.15 in Dispatch
2. 155.730 car-car
3. 155.835 Rptr./153.92 in CD/car-car
4. 155.490 direct backup

St. Charles County
Fire KDO243

1. 154.445 Dispatch
2. 154.280 Mutual Aid
3. 155.835/153.92 CD

O'Fallon PD: 154.875

St. Charles County
Ambulance

1. 155.940 Dispatch KZO390
2. 155.160 Amb. to Hosp. KRS302
3. 155.835 CD
4. 155.340 Amb. to Hosp.
also MED 7

St. Charles City

Police 453.800 KAA217
P. Works 453.475

St. Peters

Police 155.310 KKD426
Public Works 155.925

+ +

Statewide channels

Missouri State Patrol (Mobile Numbers:)
1. 42.06T/42.22R
2. 42.06 TR car to car
3. 42.12T/42.32R
4. 42.12 car to car

42.06 and 42.12 are dispatch
42.06- KAA203; 42.12- KSR937
42.38 Troop to Troop
154.905 Mobile Extenders

Point to Point 155.370; Mutual Aid 155.475; Statewide Sheriff's Net 155.730 (Some counties use 156.15 mobile)

+ +

If traveling through St. Louis City: Police:
S.O.D.D. (Traffic) 460.125; Command: 460.175 KRF578
Ambulance WXR301 155.955; Fire KAG632 154.13 Base/154.01 Mobile
If traveling through Illinois:
District 11 Maryville: 42.56B/42.70M, 154.665 B/M, KSB235
Also 155.460, 155.475, 42.50, 154.205.
If traveling through St. Louis County:

1. 154.875 North
2. 155.130 Northwest
3. 154.845 South
4. 155.655 Southeast
5. 155.565 Southwest

KAA519

6. 154.83 car to car - Detectives
7. 154.725 Riot - Countywide
8. 154.890 car to car - Beat Cars
9. 155.475 Mutual Aid

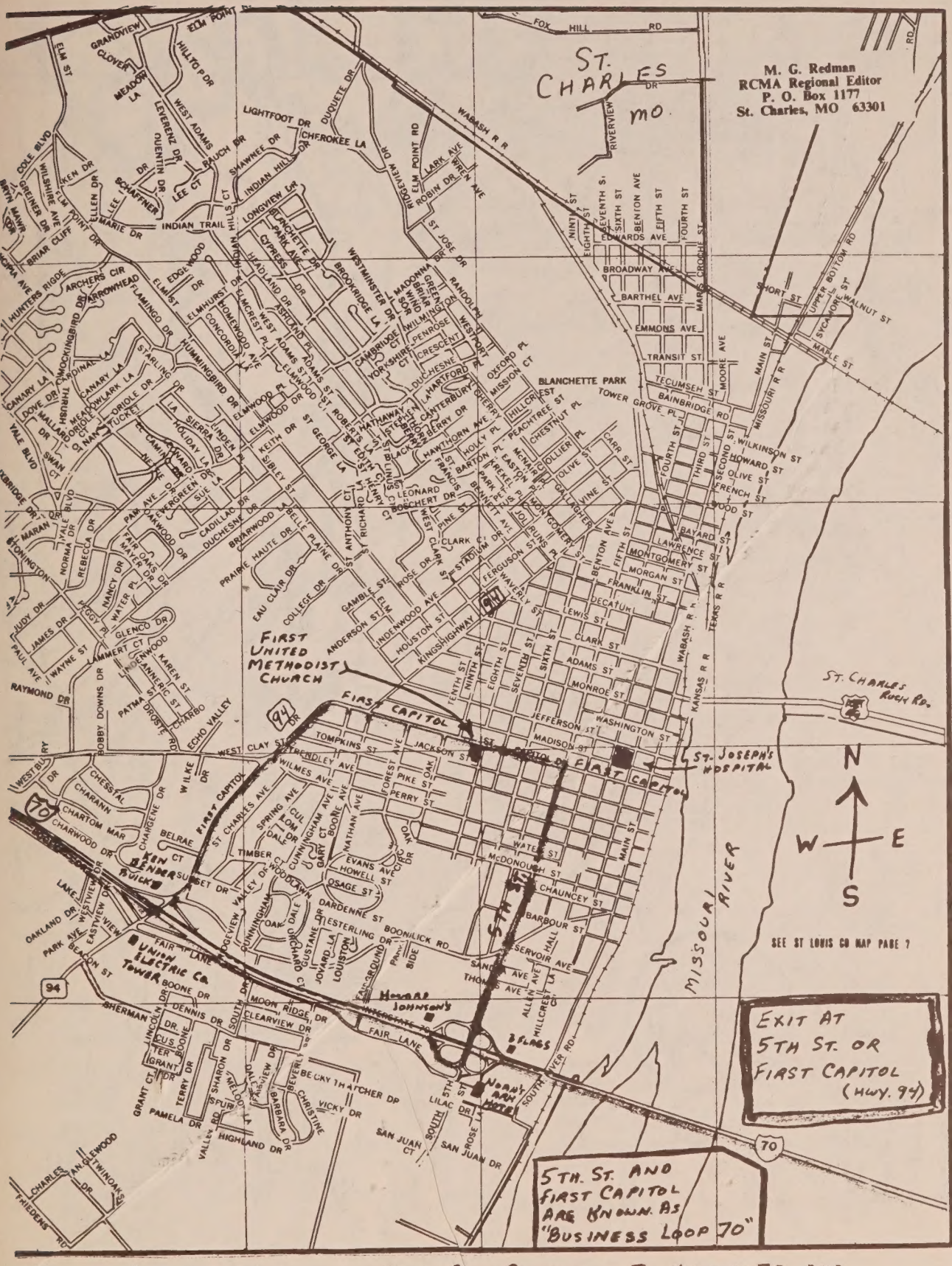
Countywide WeatherAlerts/Paging
155.865 KZC638

Civil Defense 155.715

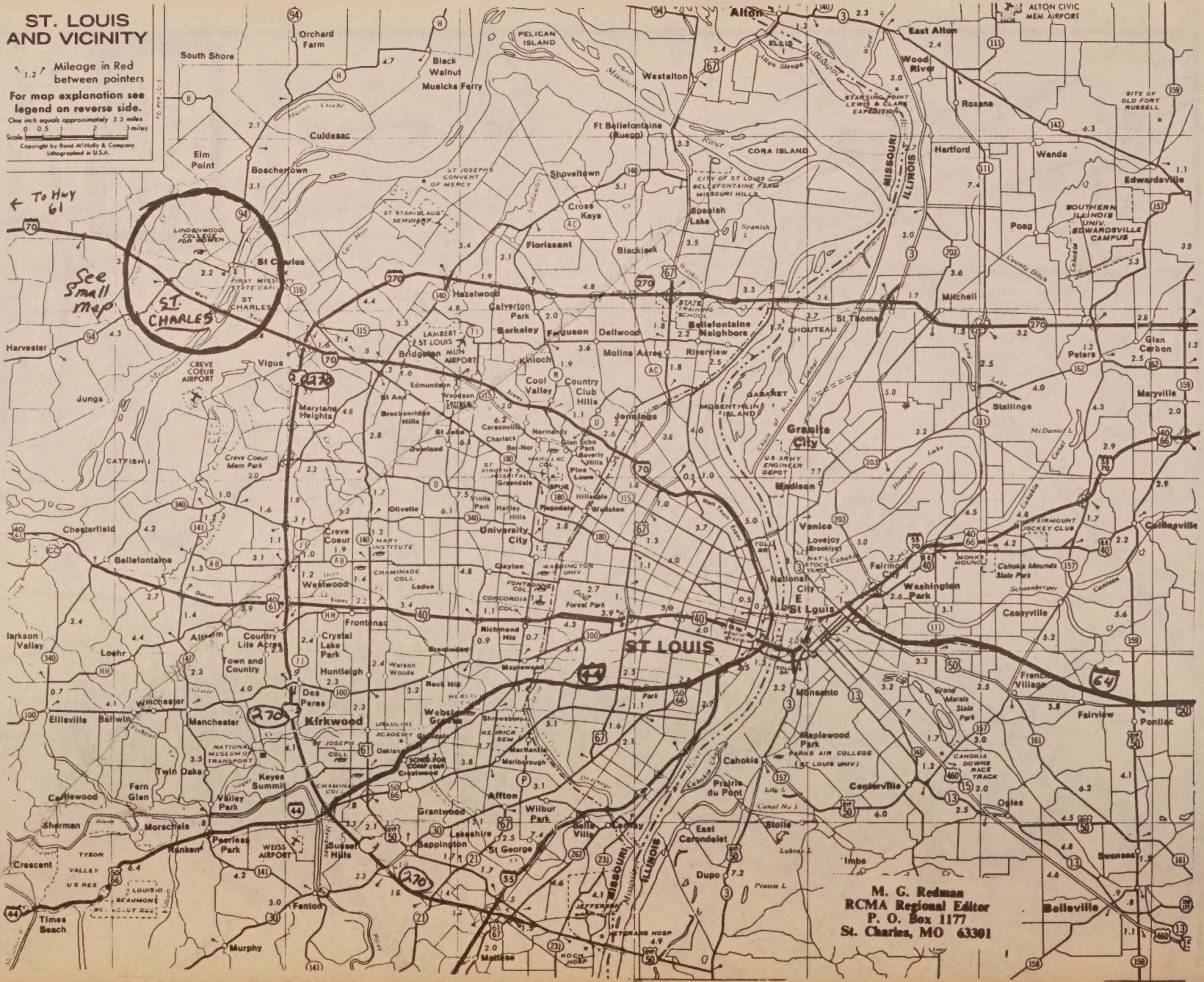
+ +

KMOX Radio Traffic Helicopter 161.730; Red Cross Disaster Teams 47.420 Area Hospital Nets 155.280/.340; Med channels generally used for ambulance to hospital. Area Ham Repeaters- 146.94/.76/.97; North/Northwest St. Louis County Fire: Dispatch 154.325, Fire Ground 154.40, Administrative: 460.600 KBG256; West County Fire: 154.37 KAF919.

St. Charles Amateur Club- 146.670


ST. CHARLES MO
M. G. Redman
RCMA Regional Editor
P. O. Box 1177
St. Charles, MO 63301
FIRST UNITED METHODIST CHURCH
FIRST CAPITOL
ST. JOSEPH'S HOSPITAL
BLANCHETTE PARK
MISSOURI RIVER
SEE ST LOUIS CO MAP PAGE 7
EXIT AT 5TH ST. OR FIRST CAPITOL (HWY. 94)
5TH. ST. AND FIRST CAPITOL ARE KNOWN AS "BUSINESS LOOP 70"

ALL IMPROVEMENTS HAVE BEEN COMPLETED TO HIGHWAY 70 AND THE MISSOURI RIVER BRIDGE IN ST. CHARLES.



M. G. Redman
RCMA Regional Editor
P. O. Box 1177
St. Charles, MO 63301

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By Nathan Young
RCMA #FL-021

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CALIFORNIA WITH CHP MAP
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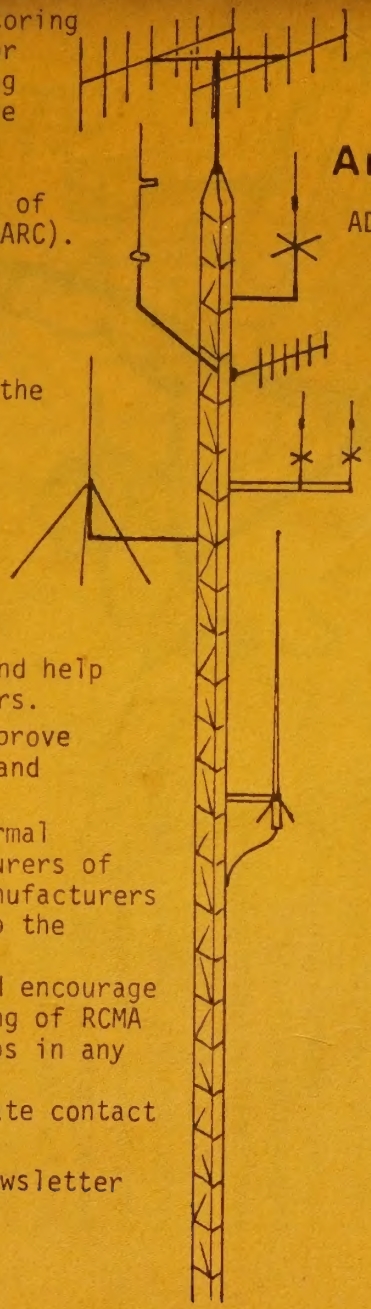
DEALER INQUIRIES ARE INVITED

The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications above 30 MHz as a hobby. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).

The goals of RCMA are:

1) To provide a fraternity for those who seriously pursue the hobby of monitor radio listening.
2) To try to be knowledgeable about two-way radio systems and operations.
3) To promote an understanding of the legal and ethical uses of monitor receivers.
4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
8) To encourage and to facilitate contact between members.
9) To publish a regular club newsletter devoted to the hobby.



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